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## Septage Management and Sanitation Revolving Fund in the City of Haiphong

July 1999



*Haiphong Water Supply and Sanitation Programme, Phase III*

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**THE SOCIALIST REPUBLIC  
OF VIETNAM**

**Haiphong People's Committee**

**THE REPUBLIC OF FINLAND**

**Ministry for Foreign Affairs**

**Septage Management and Sanitation Revolving Fund  
in the City of Haiphong**

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**July 1999**

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## **PART A- INTRODUCTION**

As a part of the World Bank's *Vietnam Sanitation Project - Haiphong Sub-project* (1B project) the Government of Vietnam and the World Bank have agreed on a credit for the investment to improve the sanitary services in three urban districts of Haiphong.

Sanitation facilities in Haiphong are inadequate, and the hygienic condition is poor: in the City of Haiphong there are still tens of thousands of households without proper sanitation, shared bucket latrines or in-house toilets without sewerage connections. Surface waters in and around the city are heavily polluted, partly due to the discharge of wastewater. HPWSSP has recognized this problem and have a programme component to convert ca. 3000 bucket type of latrines – public or private - into flush toilets with a septic tank. In connection with the 1B Project sewer rehabilitation scheme septic tanks will be installed in 10 phuongs. In the absence of wastewater treatment, installation of septic tanks is for the foreseeable future considered being the most appropriate solution. The World Bank has strongly supported installation of septic tanks to reduce the BOD load to the rivers and canals.

Vietnam Sanitation Project concept observes the Strategic Sanitation Approach. Accordingly, it is the responsibility of the citizens to take care of the household level installations at their own cost. To support community participation in sanitation in Haiphong, the World Bank has proposed a Revolving Fund to be set up. It is presumed that the Fund makes it possible also for the poor members of a community to comply with the standard and demands of the proposed World Bank 1B Project

The World Bank has requested the Ministry for Foreign Affairs of Finland to finance sanitation revolving fund facility in the city of Haiphong. This report is to summarise the technical aspects of septage management and clarify the concepts of a sanitation revolving fund in the city of Haiphong.

## PART B- TECHNICAL ASPECTS OF SEPTIC TANKS AND SEPTAGE MANAGEMENT

### 1. EXISTING SITUATION

The Haiphong Sanitation and Sewerage Company (SADCo) operates the sewer network, drainage channels, regulating lakes and tidal gates in the urban centre of Haiphong. Septage management has been the responsibility of Haiphong SADCo since July 1998. At the time being, SADCo has no sewer contracts but has allocated permission for some recent construction works. The total service area 27 km<sup>2</sup> consists of three districts (37 phuongs) viz. Hong Bang, Le Chan and Ngo Quyen and has ca. 420 000 inhabitants and 100 000 households. The number of households connected to the sewer system is not registered.

The present number of septic tanks in Haiphong is estimated to be from 7000 to 10 000. The tanks are generally located directly underneath toilets at the back of houses, often a long way from the nearest access point for road vehicles.

SADCo uses a fleet of three vacuum trucks (2x1.8 m<sup>3</sup> and 0.35 m<sup>3</sup>) for septic tank emptying. The number of staff for this activity is 2 persons per truck. During the second half of 1998 670 septic tanks have been desludged according to Haiphong SADCo.

SADCo's septage management is demand based. SADCo provides tank emptying service only when called out by householders after problems arise. Normal procedure is to break into the tank by partially destroying the floor. However, if operational problems arise in the tanks, which are out of reach for trucks, URENCo staff will manually empty them, on request.

Collected septage is transported and dumped at Trang Cat landfill.

### 2. RATIONALE OF SEPTIC TANKS

The Building Code of Vietnam Volume 1 stipulates: '*Sanitary sewage from toilets (of housings, public and industrial buildings), and hospital sewage must be treated through septic tanks, constructed compliant with standard before discharge to urban sewer*'. Accordingly, in Haiphong, one of the preconditions of construction permit issuing is a septic tank included in the design. However, there is no requirement/law to empty septic tanks: they are emptied only in case operation fails. There is a risk that the current practice of leaving septic tank systems without maintenance continues and the anticipated benefits of construction of new septic tanks are only temporary.

Main advantages of septic tank are:

- it works reliably with elementary maintenance work;
- it provides preliminary on-site treatment (up to 35% BOD reduction); and
- it provides possibility to solids free sewer system (up to 65% solids reduction).

Main disadvantages of septic tank are:

- it provides low nutrient and bacteria removal efficiency;
- it is rather expensive; and
- it requires regular desludging.

The key questions in septic management are what the benefits versus costs are and what more sensible alternative would be. The current public opinion agrees that construction of centralised wastewater treatment in Haiphong is not realistic alternative in the near future.

### 3. FORECASTED NUMBER OF SEPTIC TANKS

Haiphong Water Supply and Sanitation Programme (HPWSSP) started replacement of bucket latrines with pour-flush toilets and septic tanks in 1995 (see Table 1), and the programme is continuing. It is anticipated that about 3000 new septic tanks will be constructed by the end of the year 2000 (Table 2). The programme target is to eliminate URENCo's night-soil collection service and bucket latrines by the end of 2000.

Table 1. Bucket Latrines Converted by HPWSSP since 1995

<i>Phuong</i>	<i>Number of septic tanks</i>
Cau Dat	257
Quang Trung	256
Phan Boi Chau	184
Pham Hong Thai	159
Me Linh	287
An Bien	303
Le Loi	350
May To	210
Cat Dai	480
Total	2486

Table 2. On-going and planned bucket latrine conversion (HPWSSP)

<i>1999 on-going conversions</i>		<i>plan for 1999-2000</i>	
<i>Phuong</i>	<i>Number of septic tanks</i>	<i>Phuong</i>	<i>Number of Septic tanks</i>
Trai Cau	280	Ha Ly	331
Luong Khan Tien	160	Lac Vien	455
Lach Tray	130	Gia Vien	99
Hang Kehn	109	Van My	54
Du Hang	80	Cau Tre	580
		An Duong	420
		Lam Son	160
Total	759		2099

1B Project will include sewer rehabilitation in the following phuongs (Annex 1) in the three urban districts:

- Hong Bang district: Thuong Ly, Trai Chuoi;
- Le Chan district: Tran Nguyen Han, Trai Cau, Hang Kehn;
- Ngo Quyen district: Le Loi, Lach Tray, Gia Vien, Lac Vien, and Cau Tre.

It is anticipated that new septic tanks will be installed in connection with sewer rehabilitation. The estimated number of households in the ten phuongs is 22 000 and the anticipated number of new septic tanks 6500 by the year 2006 (see Part C - Chapter 7.2).

Depending on environmental policy and development of Haiphong the estimates of number of septic tanks can base from zero-growth to optimistic 75% coverage by 2010. With moderate population growth and 25% proportion of communal septic tanks shared by five households the number of septic tanks to be operated by SADCo could then be from 10 000 to 65 000 pcs. More realistic estimation of 35% coverage by 2010 would equal to about 30 000 septic tanks, *i.e.* six new septic tanks have to be built in every working day during ten years period (Table 3).

Table 3. Three scenarios of septic tanks in 2010

<i>Coverage</i>	<i>Number of septic tanks in 2010</i>
Present coverage	10 000
35% growth	30 000
75% growth	65 000

#### 4. IMPLEMENTATION OPTIONS

Legally (Building Code of Vietnam, Volume I) domestic wastewater must be treated through a septic tank before discharging into urban sewers. Thus, all the new built houses must have a septic tank.

All the newly constructed tanks are private septic tanks built under toilets or behind houses. Currently, communal septic tanks shared by groups of flats are not installed although it might be beneficial and worth of investigation. Major problem in construction of communal septic tanks is to find suitable locations for the tanks.

In the bucket latrine conversion programme (HPWSSP) the local construction companies undertake the installation of the septic tanks and in the new buildings the house owners mobilise their own labour. Both of these approaches are successfully applied in Haiphong. In the planned new septic tank construction programme funded through the revolving fund either of the approaches can be adopted. The latter alternative would be cheaper but would require closer supervision than the former. Both pre-fabricated and on-site built tanks have been used.

#### 5. OPERATION

##### Sludge accumulation

Design value for the sludge accumulation is 30-40 l/ca/yr. Population in the urban area of Haiphong is circa 420 000. Thus, if all the urban population use septic tanks annual sludge accumulation can be estimated to be 17,000 m<sup>3</sup>. In the long run this will be the maximum amount of sludge to be collected yearly (equivalent to ca. 56 m<sup>3</sup>/day).

##### Septic tank accessibility

Most of the septic tanks do not have access holes to the compartments, and often they are along long narrow alleys far from vehicular access points. If septic tanks are emptied on regular bases access holes have to be built and specialised equipment in alleys have to be used.

##### Equipment for emptying

SADCo's existing equipment consists of three old vacuum vehicles, two new vacuum tankers and three mini-vacuum tugs together with hook-lift truck. In case of operational failure, the current practice is to partially break the toilet floor and empty the tank, manually or with a vacuum truck depending on the vehicular accessibility.

The main operational improvement need is to replace the manual emptying procedure in the alleys. At the moment, the most promising alternative seems to be combustion engine driven hosepump on a pushcart. In the absence of reliable forecast of number of septic tanks and O&M data only rough estimates of the needed equipment can be made.

SADCo's existing equipment will be sufficient for emptying septic tanks in the easily accessible locations now and in the foreseeable future. If the whole urban city is served, five hosepumps, 10 sludge tanks and one hook-lift truck are needed in addition to the existing equipment More

accurate estimation of equipment can be made as the scope of septage management is known and O&M data are collected.

#### Involvement of private sector

Septic tank emptying is a clearly defined activity, which can be among the tasks SADCo might contract out. The decision whether to contract out or not should be based on technical, economical, health and environmental aspects. If septage management is contracted out the contract should be commercially viable and the contractors should be aware of health and environmental aspects, and have proper working procedures and adequate equipment to provide the service. Hence, the work of the contractors should be appropriately supervised to guarantee that they are fulfilling the task they are paid for according to the requirements.

Lately, private septic tank emptying service has been offered in Haiphong. This type of activity is positive and should be encouraged. However, septage management should be the responsibility of SADCo's and it should have the decision-making power on septage management.

## **6. SEPTAGE TREATMENT**

As a part of The Vietnam Sanitation Project – Haiphong Sub-project *Preliminary plan of sludge utilization at landfill site* has been prepared. Septage treatment facilities will be financed by the Bank's loan. The planned treatment method is composting. Composting and maturing will take place at separate fields at the Trang Cat landfill. At the landfill septage is mixed with solid waste and composted for two months. After composting mixture is matured for four months. Matured compost material can be utilised e.g. as substrate layer at the landfill.



## PART C – DISCUSSION OF REVOLVING FUND

### 7. REVOLVING FUND – GENERAL ENVIRONMENT

#### 7.1 Citizens' Willingness to Contribute to Sanitation

Sanitation situation in Haiphong has been surveyed at 90's in four surveys:

- National Urban Wastewater Collection and Sanitation Strategy 1995,
- Community Participation And Willingness To Contribute For Upgrading Sewerage And Sanitation System In Dong Quoc Binh Ward (Report On The Results Of The Socio-Economic Survey In Dong Quoc Binh Ward, April 1997)
- The Awareness and Evaluation of customer and supplier on the present water supply service in Haiphong City, 1998, and
- Demand To Take Loan For Sanitation Willingness And Ability For Repayment, 1999.

The two most recent surveys, which have concentrated on sanitation in Haiphong are summarised below.

#### **Demand To Take Loan For Sanitation Willingness And Ability For Repayment, 1999**

The three surveyed phuongs (Tran Nguyen Han, Trai Chuoi and Cat Bi) had a combined population of 39 906 living in 10 296 households as of April 1999. The survey was conducted on 300 households with 1 230 people, averaging 4.1 people per household.

The monthly average per capita income is VND 262 700 or VND 3 152 000 a year (roughly USD per year 228). The survey income level is equivalent to the USD 220 annual average GDP per capita in Vietnam. The survey results show that 2.3% of the interviewees ranks extremely poor; 12.1% poor; 14.1% fair; 40.9% rather well-off; and 30.5% well-off. (People of the extremely poor group has a monthly per capita income less than VND 100 000; the poor group between VND 100 000 and 150 000; the fair group, between VND 150 000 and 200 000; the rather well-off group, between VND 200 000 and 300 000; and the well-off group over VND 300 000).<sup>1</sup>

A majority of the study area population (86.3%) have latrines at their houses, 82.6% septic or semi-septic latrines, 1.9% double-tank latrines, 0.4% bucket latrines, 2.3% slab latrines, and 12.7% simple latrines. The remaining households do not have latrines at their houses and have to use public or neighbours' latrines. Over half of the survey families accepted the present situation of the sewerage system in their houses.

A majority of the interviewees (99.3%) agreed on necessity to establish a fund to provide loans to local residents to enable them to upgrade home sanitary facilities. This group held that the establishment of such fund is important and necessary. 77.7% of the interviewed households expressed wishes to borrow money from this fund to build or upgrade their toilets. 23.3% of the households did not wish to get loans from the fund for the following reasons: they had good latrines (60%), they were too poor to pay the debt (30%), they were living in temporary houses (4%), and they themselves can afford.

Many of the interviewees expressed their wish to borrow between VND 2 and 3 million with monthly interest rates ranging from 0.3 to 0.5% during a period of between two and three years

<sup>1</sup> According to a survey to the HPWSSP in 1998 (in the same three phuongs), an average monthly household had income per household at VND 1 289 803 or VND 335 485 per capita (average household has four members). Average to under average and poor households have income per household as follows: Average VND 1 103 000; under average 741 000 and poor 534 000. Income in the 'average' category was VND 1 103 000 per household. According to the surveyors' figures, about 55% of the population are 'poor' to 'average'.

Those wishing to borrow VND 2 million plan to build a latrine and upgrade the sewerage system inside their house. Many of those wishing to borrow VND 3 million loan plan to spend VND 1 million on upgrading both the inside and outside sewerage systems and the rest, VND 2 million, on building a septic latrine.

#### **A practical attempt to initiate people's participation in sanitation development in Haiphong**

The survey was carried out in Dong Quoc Binh, 1997. The survey was carried out in compliance with the normal orders and consisted of two parts: a household questionnaire using a random sample of 309 households in a total of 2,057 households (i.e. a sample of 15%) and Tree Focus Group Discussions at three residential clusters.

97% of the Dong Quoc Binh ward citizens in a 1997 interview expressed willingness to participate in environment improvement activities. Sewerage and drainage, respectively were considered no. 1 (60%) and no. 2 infrastructure development priorities among the citizens in the DQB phuong. In this predominantly (80%) rental area - where flooding is no worse than average of Haiphong - people are also willing to contribute to improvements, though they prefer doing this mainly through labour; individually or in a group.

*In this area of rental dwellings, the DQB, people are willing, but not as much as would be required, to contribute own funds to sanitation. 85% are willing to contribute part of project cost for upgrading the sewerage system; 2/3 would commit a minimum of VND 150 000 contribution. However, among the very poor<sup>2</sup>, only 17% were willing to contribute.*

*The target group for a sanitation revolving fund is poor to medium income families, while the households without a septic tank, is the 'technical' target group. An shortcut analysis is to conclude that those without such a basic household installation like a proper toilet, are also most likely households of poor to medium income.*

#### **7.2 Septic Tanks in Haiphong and in the Project Area**

The 1B-Project area of ten phuongs (Annex 1) has approximately 22 000 households<sup>3</sup>. If the lack of sanitation facilities at 50% (this is a rough average many estimates) of the households is proportional to the entire Project area, this fact suggests a potential target group of 11 000 households in the Project area. 6 500 of them can be served through the proposed revolving fund by the year 2006. While many do have a septic tank, the remaining area can all be served by extending the fund through more cycles than proposed here or the citizens will alternatively use own funds. The existing HPWSSP bucket latrine programme component covers the cost of altogether 3000 septic tanks, but they are not automatically in the Project area.

The macro level impact for overall pollution reduction would be the same, where ever the tanks are to be built. The 1B project has prioritised 10 phuongs (namely, Thuong Ly, Trai Chuoi, Tran Nguyen Han, Trai Cau, Hang Kehn, Le Loi, Lach Tray, Gia Vien, Lac Vien, and Cau Tre; see Annex 1) where phuong level improvements are going to be carried out. It is logical that revolving fund activities will be focused on the same phuongs at the first phase.

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<sup>2</sup> Also the Phuongs have information on who is to be considered poor. This is not cross-checked with the interviews

<sup>3</sup> Precise information by the WSCo on population at eight Phuongs + estimate on two Phuongs.

### 7.3 Willingness to Take a Loan – Ability to Pay Back

A majority of the interviewees (99.3%) in the 1999 survey agreed on necessary to establish a fund to provide loans to local residents to enable them to upgrade home sanitary facilities. This group held that the establishment of such fund is important and necessary. 77.7% of the interviewed households expressed wishes to borrow money from this fund to build a toilet or upgrade sanitation facilities. 23.3% of the households did not wish to get loans from the fund for the following reasons: they had good latrines (60%), they were too poor to pay the debt (30%), they were living in temporary houses (4%), and they themselves can afford.

Many of the interviewees expressed their wish to borrow between VND 2 and 3 million with monthly interest rates ranging from 0.3 to 0.5% during a period of between two and three years. Those wishing to borrow VND 2 million plan to build a latrine and upgrade the sewerage system inside their house. VND 3 million loan wishes often plan to spend VND 1 million on upgrading both the inside and outside sewerage systems and the rest, VND 2 million, on building a septic latrine.

Willingness to take a sanitation loan – if available - appears being dependent on awareness. In the interview situation of the referred DQB study, the interviewer actually provided for more information. While initially respondents may have been reluctant, after some information had been provided, as many as 73% of the citizens saw the Revolving Fund *necessary* for creating favorable conditions for sanitation improvements. Among these people, 68% expressed their willingness to borrow money from a Sanitation Revolving Fund. This is 50% of the total of those interviewed.

*Willingness to pay back* the loan is more dependent on further issues than *willingness to take a loan only*. For sure, "ability" to pay back should contribute to willingness to pay back. In a campaign, willingness (being an abstract concept) can be increased more than ability (this is tangible and depends on actual disposable income). In the proposed model for sanitation sub-loans, both willingness and ability to pay back are guaranteed by group confidence to award loan to a specific member in a savings group, rather than on strict individual considerations. A collateral given to a third party is such an individual consideration. In fact the only trust between the two individuals in awarding a collateral and a related loan is that the lender party is confined to guard the collateral! Accordingly, willingness as well as ability to pay back are always to be jointly considered – by the group committee - when individual loans are being awarded to selected members (maximum 1/3) in the savings group. Mutual trust is obvious, if the future borrower agrees to the compulsory savings by handing in her money to the trustees.

Mutual trust based transactions are not unknown in our western societies, either: all the equity trading is based on confidence. Investing money at stock exchange companies, on own capital terms also takes place without any collateral.

In reference back to the survey carried out in the DQB phuong, it should be considered positively that after provision of some information only, willingness to borrow, among the survey respondents, was increased. This fact is a good piece of news to those who design Public Awareness Campaigns (PAC). It should be noted that an interview situation is for obtaining facts. In observance of scientific rules, it is not primarily (unlike PAC) meant to prompt converts. The expressed reluctance for financial contributions among the very poor (less than 2%) however, is a particular challenge to the PAC designers. A campaign can increase willingness (by reorienting spending priorities), but less so regarding the ability to pay back.

The PACs will be organized as a part of the 1B Project concept. The public will be informed about the Project. Linkages sanitation / health / sewerage / drainage / septic tank will be

highlighted. People will be encouraged to install septic tanks where ever they do not exist<sup>4</sup>. People will be encouraged to use disposable funds for sanitation and after campaigns, if they are successful, willingness to install tanks should be increased. If willingness to use own funds for sanitation is on the increase, also willingness to take sanitation loans should also increase. Either way, willingness to save money for sanitation, should increase.

Ability to pay back sanitation loans should be studied carefully. Due to the prevalence of gray economy, it is believed that ability to pay is actually higher than envisaged. How do people finance their typically USD 30 000, 100 m<sup>2</sup> construction sites? The sociologists cross check this by simultaneously studying expenditures. In the HPWSSP 1998 survey, however, expenditure was at a proper level, at 80% of the income. *Who does?*

Though the poorest are likely to remain as users of public toilets, some alternatives could perhaps be suggested for those who are 'willing but not able'? Unless completely rejected by the phuongs, possible technical or financial alternatives to the Revolving Fund should be proposed, if they do not risk the emerging saving ambitions within the phuongs. To assess, if there are such options available, and to establish the categories of the poor and / or of those in need of support, a four-field matrix may be studied. The matrix is admittedly simplified, as preferably there should be three attributes (=8 compartments in a cube with yes/no orientations. 'Willingness to borrow', 'Willingness to pay back' and 'Ability to pay back'.)

Matrix: Breakdown of potential borrower clients:

Willingness	1. Not willing to borrow nor able to pay back	2. Willing to borrow, not able to pay back
	3. Not willing to borrow, but able to pay back	4. Willing (and able) to borrow and pay back
Ability to pay back the loan		

Aim of a PAC campaign is to encourage the phuong Citizens to improve their sanitation. Those who still after the campaign remain on the left side (box 1 or 3) shall pose a problem as the campaign fails to reach the desired aim. Perhaps only alternative for clients who even after the PAC (due to poverty) remained in no. 1 category, is the URENCo's bucket latrine conversion programme for citizens of HP as well.

On the other hand, those who already took a loan but cannot repay, (i.e. they are in box 2) can hardly at a later stage be referred to the 'bucket latrine - second window', to collect a subsidy for the bucket latrine programme, just because they were unable to repay? This poses a risk as some may claim the Programme becomes morally liable for replenishment of the Fund in their part, i.e. if the window for bucket latrine conversions remains open.

Also, in these saving-credit groups, there may be those who (against the mutually agreed rules) in fact may seek to take the primary loan for income generation (while using own funds for sanitation). Also those in box 3 will benefit from the campaigns, but are likely to use own funds for the septic tanks, without joining the saving-credit groups. This may not be harmful to the Project but harmful to the Fund morale, though such a practice perhaps should not be strictly sanctioned from outside.

<sup>4</sup> At time of writing it is unclear, whether the PC will issue a specific decree, also ordering such installations

#### 7.4 Initiatives and Alternatives in Vietnam

A Revolving Fund – whether for sanitation or for income generation, is a consumer friendly bank as it can match the needs of the poor better than a traditional bank. It promotes savings, which is low in Vietnam and contributes to economical use of funds that otherwise may be kept under the mattress. In the proposed model, savings make lending for both sanitation and for income generation possible, precisely for only those who decide to join. For those who want to build a septic tank, it is not the only option, as everything is on a voluntary basis. It is, nevertheless, difficult to imagine a centrally coordinated subsidy scheme on the same grounds as it does not promote these virtues of good household management.

A subsidy concept does not emanate from the same grounds. To administer a subsidy scheme may also be difficult, as all the demand perhaps gets expressed at the same time, when the window opens to receive applications. It is a poor facility to be associated with a successful campaign for sustainable solutions in sanitation. And, even in the subsidy scheme, there must be some fractional price to be paid by the households; in cash or – through a revolving loan – for the hardware and/or for the labour?

Savings are already being used for sanitation, precisely to build septic tanks, along existing schemes by the Women's Unions in Haiphong and in Danang. Use of own funds only, is certainly a positive, obviously *the most valuable outcome* of ongoing awareness campaigning. Its results will be seen when adequate amounts of funds have been saved and subsequently, septic tanks are installed and at work.

In the Vietnamese society, with reference to saving money, group based activities seem to be part of tradition; among them 'Hui' an old gamble among 7 to 10 members. This is part of the informal sector, where also traditional money lending prevails: Traditional money lending is an easy procedure, but at a 10% p.m. interest rate. A study from HCM confirms, an easy borrowing procedure – even if apparently resulting in misery - takes preference over a complex one.<sup>5</sup> In the same HCM project, also a needs analysis was carried out. Though we do not know, how much informal financial facilities are being used for sanitation, citizens' needs in a few HCM phuongs (according to the reference survey) were the same as in Haiphong: Income generation, private toilets and infrastructure / flood problem.

In HCM, while life might be tougher, all kind of formal and informal facilities emerge spontaneously or are created for the need. They have e.g. 1) Poverty Alleviation Fund (0.6% per month), to lend VND 500 000 to 5 million for unspecified purposes, 2) Women's Union for income generation, at 1.5% per month, and 3) ENCO-EPFL Project to build up simple private toilets, for loans up to a maximum of VND 1 million. The latter facility has a 2% per month interest rate and a compulsory savings element of VND 1000 per day for all of the 5 – 10 group members. In two years' time, 120 simple toilets had been built with this fund of only VND 30 000 000. A parallel savings scheme made further house repairs possible, while the relatively high interest income was channeled to community sanitation and for increasing the fund's capital.

In Haiphong, the HPWSSP has a bucket latrine conversion programme. By the end of this Programme, 3000 bucket latrines will be converted to private or public flush toilets, under a 100 USD subsidy scheme<sup>6</sup>, whereby most of the hardware is procured through tendering by URENCO and the Programme. This as such a successful programme component, however being a subsidy scheme, is strictly against the principle of the Government's Strategic Sanitation Approach, while in contemporary Vietnam, it also clashes with the principles of the emerging market economy.

<sup>5</sup> Small Credits for private toilets, Mingora Workshop 24.4. – 1.5.1999 by Thai Thi Ngoc Du et al.

<sup>6</sup> Early terms were more generous: USD 200 from the Programme and USD 100 from the City.

*A successful PAC campaign - in case it is part of the joint WU/ Programme activities, but without the Revolving Fund prerogative - is likely going to attract unofficial, high interest rate facilities also to Haiphong. As the banking sector remains underdeveloped, the 'loan hawks' are likely to thrive on human being's greediness and despair. The HCM study referred to above, confirmed us that unofficial money lending addressed the poorest or most ignorant person's needs in their characteristic search for the most simplistic solutions.*

### 7.5 Virtues and Needs

Needs and aspirations are associated with virtues. Among them are: hard work, saving money, voluntary work, mutual trust, caring for environment and for other citizens, while laziness, coercion, luxuries, littering and ignorance of other people are to be considered vices in just about any society. Accordingly, also pursuits for the citizens' activities towards the positive things in life (like the PAC) and related use of resources such as savings and a Revolving Fund, should be received positively. Admittedly, the Fund has compulsory elements. saving is equally compulsory as repayment or installing the septic tank, nevertheless, joining these groups will be voluntary. A PAC campaign and a subsequent loan taken for better sanitation should merely express citizens' inclination for better quality of life in the future. A Revolving Fund should be available for all those citizens who express willingness to borrow and therefore, have to save money to qualify for borrowing.

It appears, whenever researchers asked about priorities in infrastructure area, good sanitation was stated as a priority in different cities. On a more ample (priority) needs' scale, which includes both optional consumer items, infra-structure and income generating activities, sanitation may not rank high anymore. Caution in interpreting results is required, as sanitation is a far more basic need than a motorcycle. It may be compared to drinking water, where only the first liter ranks high - for a pedestrian in Sahara - but surely fails to be named in many other contexts.

Caution is also recommended in drawing any conclusion from prevailing consumer patterns that the poor would perhaps disclose a preference pattern inclined more to basic needs at an interview than the rich would do. The poorest were not very helpful in this respect at the DQB phuong.

### 7.6 Interventions and Subsidies

Subsidies are typically tools by the government in their attempt to promote use of something considered vital for the citizens. A subsidy intervention can be made to the final product prices, to the resources used at a manufacturing process, to the intermediary resources such as (the cost of) money. If the prices are preferably retained high, a subsidy can be moved to the income side, through tax cuts or through vouchers to the buyers. As a rule, a direct intervention is considered better (being more focused) than an indirect one.

A strong subsidy usually creates strong demand. In some cases strong demand makes it that supply cannot meet this demand. Heavy subsidies may cause *scarcity rents* or payments from the consumer to the service provider /seller who now controls the market place.

A subsidy from the social office, like a voucher, is more common in the west, while a socialist economy seems to favour subsidies directly from the service provider (such as lower utility rates to the veterans, etc.). Accordingly, assessment of a single man's poverty (if that is the issue of the subsidy giving), may be done by several service providers. A message however, also from the Programme, is to get the subsidy from the social office. According to this principle, the billed rates for the services should be the same for all

A subsidy scheme (for e.g. installation of a septic tank) can be for everyone willing or for those who are assessed poor. Assessment calls for people who carry out this assessment. Considering the relatively low cost of the septic tank (at ca. USD 150), 'Low cost assessment' (being the only viable alternative and therefore to be performed by those in the To neighborhood) is also required, which may be very disruptive compared with a group confidence model of the saving-credit groups.

Vietnam may serve as a sample of an economy with a lot of subsidies, coupled with low salaries and wages. Through low /subsidized prices on most items, the first impression is that the citizens can afford, or can they? In the market economy countries, on the other hand, prices and salaries are higher and there are less subsidies. The poorest find it hard to buy most of the items as subsidies have popularly fallen into aversion by the governments, who are now more obedient to market forces.

In Vietnam, cash type of subsidies (from the employers) are likely not revealed to the unknown interviewers, who come to make a study on the income level. If the employers provided for material subsidies, they are even more likely not to be included or associated with income.

Also a loan scheme like a revolving fund can have subsidy elements or the scheme can be used to buy subsidized items. If the interest rate selected is very low, some harm may be caused to the banking sector, which in Vietnam is not particularly developed. Very few in Vietnam still trust their money to the banks. Saving(-credit) schemes, therefore for the time being, emerge outside the banking sector. Our Project partner and sponsor, the World Bank group in Vietnam, is also concerned with the development of the banking sector.

An unusually high subsidy on the interest, is likely to cause speculative demand on the sanitation loans, thus diverting national resources and weakening the saving-credit fund(s) unnecessarily. When fully developed (like perhaps now in Finland), the normal banking rates should be quite competitive, if only the clients had a collateral for their borrowing.

Any savings scheme, alternative to the mattress but a component for the saving-credit groups, even if it emerges outside the banking sector, should as such be considered positive for the economy and for the development of banking services in particular.

In a subsidy scheme, which is based on the price intervention, tendering of hardware (and standard components) among local suppliers is the only practical solution. This option, however, calls for deployment of more capital intensive production facilities. Though concrete part factories are available in Haiphong, local or on-site production may be more appropriate as the poor members in the phuongs can utilise their labour more extensively; i.e. not only for installation of the components from the factory but also for on site production of concrete and brick items. It is likely that poorest members of the society, (who may be un(der) employed; and assumed to have more available time), substitute money by their labour, by building septic tanks for the rich and medium income neighbours. They may join the saving groups or even buy their respective septic tanks for cash.

Final word on subsidies: It appears somewhat clumsy to embed a subsidy scheme to the running operational practices by the Women's Unions. It is definitely disruptive to the existing saving practices for sanitation as the savers subsequently have to pay full price for sanitation items. Secondly, perhaps unfit, subsidised parts from the factory may not simply technically fit into the household premises. Instead, they end up to the secondary market, to tertiary use, but in the chain, at a premium price!

## 8. THE WOMEN'S UNION: WU AND CWU

The City Women's Unions (CWU) may be considered as NGOs or mass organizations due to wide membership. They are set to protect legal and legitimate rights and interests of women and to create favourable conditions for equality and for overall development. Over the past years, the WU has been implementing many practical and effective programs in promotion of women's creativity for socio-economic development and for the national renovation drive. One of their activities is a credit program for employment creation and for household income generation through voluntary saving-credit groups.

It has been proposed that in the Vietnam Sanitation Project, the Vietnam Central Women's Union (WU) will be responsible for the overall management of Public Awareness Campaigning (PAC) while the CWU's take care of the Revolving Funds.

The CWUs have gained experience over the past years both in sanitation development through savings and in income generation. It is therefore proposed that the CWU should implement a revolving fund for sanitation sub-loans in order to improve household sanitation conditions, which further contributes to the improvement of health situation, especially that of women and children.

The proposed model implies saving - credit groups in conjunction with information, education and communication activities, all meant to improve people's awareness to protect their environment, thus contributing to improved family and community health.

## 9. PROJECT OBJECTIVES AND TARGET GROUP

### 9.1 Objectives

The general objective is to provide a credit facility for sanitation sub-loans to serve households that wish construct or improve latrines, septic tanks, simple toilet hardware and sewerage connections in order to reduce environment pollution and related diseases in the City of Haiphong.

The WB draft manual<sup>7</sup> specifies these objectives more in detail, also covering stages when need is being created:

- Make the respective communities aware of typical health problems and of the related environmental causes as well as of their responsibilities in environment protection, especially on the household level,
- Establish an appropriate credit system to help especially low-income households to construct or improve household sanitation facilities through saving-credit groups,
- Establish a linkage between the revolving fund for sanitation and the pursuits for households' income generation,
- Coverage of 90% of the project area households in using safe sanitation facilities, within the next five years

The target group of the Fund are low-income households who *are willing and express need* to borrow funds for construction of latrines or for improvement of existing septic tanks, toilet hardware and sewerage connections.

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<sup>7</sup> Draft Operational manual for: Implementation of "revolving fund sanitation sub-loan"; Three cities' sanitation project, Hanoi June, 1999



## 9.2 Saving – Credit Activities

The revolving loan for sanitation has the following characteristics:

*Borrowers (to be) will participate saving-credit group meetings in their area on a monthly basis. As soon as they qualify as borrowers, i.e. after the compulsory savings criteria have been met, the maximum loan amount for them will be VND two millions for two years with a grace period of six months and at a monthly interest rate of 0.5 – 0.8%. The repayment is guaranteed on confidence, there is no collateral to the lender. The pre-saving however, is a kind of collateral.*

### Saving-Credit Groups

Saving-credit groups are to be considered an effective way to revolve the capital and to integrate sanitation revolving sub-loans with other phuong activities in progress. Saving-credit groups will be formed at "To" level. An average of 12-15 members will form one saving-credit group.

The following conditions need to be met in order to join the groups:

- The household has a registered domicile in the project area
- They have expressed need to borrow funds for sanitation construction or improvement.
- They are willing to participate in saving-credit groups and committed to comply with the group-rules (regular saving, use of funds for proper purposes, monthly payment of interest, blockade on savings while borrowing, etc.) and to join the activities
- The prospective borrowers have a detailed plan to construct or improve household sanitation facilities and they can present a simple cost analysis to justify the loan.
- They have no previous bad debts but considered having ability to pay back.

The groups are established following these principles:

- members should be living near each other and they must commit to the group rules,
- participation in the monthly group meetings is compulsory and the members must be committed to help each other.

The Standard Agenda of monthly group meeting is as follows:

- Collect interest, saving and principal on repayment.
- Exchange experience on income creation and generation,
- Discuss environment and sanitation activities together with other Women's Union activities,
- Co-ordinate environment and sanitation with awareness education and hygiene behaviour,
- Encourage community participation in environment protection and sanitation

### Loan amount and repayment terms

The loan amount is decided by each borrower in accordance with their needs and situation, but it should not exceed VND two million. In reality, low-income households are likely to borrow less for sanitation options that are more rudimentary. Not more than one third of the group members are allowed to take a loan at the same time.

After an initial grace period of six months, the monthly principal collection starts on the seventh month of the borrowing cycle. Each borrower repays VND 80 000 per month. In the last month of the period, however, the borrower has to pay VND 160 000. Pre-savings (VND 480 000) will now top up loan repayment as well.

The WU in Haiphong, have also presented an alternative scheme of slower repayment at the end.

**Interest rate and use of interest income:**

Borrowing interest rate is proposed to be 0.5 – 0.8% per month. It is to be determined by the Management Board for at least one year at a time.

Saving interest rate is half of the borrowing rate.

It is suggested to use the interest income in the following way:

1. Risk fund	25%
2. Administrative cost for "phuong / to"	40%
3. Administrative cost for CWU	20%
4. Incentive fund	15%

Risk fund is to be used for writing off the bad loans. Each case must be approved by the Management Committee and the saving-credit group will be required to pay back half of the outstanding loan amount.

**Pre-Savings**

Savings are compulsory for all members. All saving-credit group members will be required to save VND 20 000 per month (i.e. 1% of the loan amount) starting at the first month of lending. Monthly saving will be collected in the group meeting. Savers are not allowed to withdraw their savings if they are to become borrowers. At the end of the saving cycle, total money saved will be 480 000 dong. This money will eventually constitute the last lot of repayments. In the meantime, the savings can be on-lent to other savings-credit group members for income generation.

**Income generating facility**

Haiphong CWU proposes to have an integrated model: taking a loan for sanitation shall <sup>later</sup> ensure access to an income generating loan to a maximum of VND 1 mio. Through this integrated model, the Women's Union in Haiphong will encourage the low-income households to improve sanitation as well as to generate household income. For the purpose of income generation, each borrower will be requested to present an investment plan. If necessary, the borrower will be trained by the WU to use the funds in an efficient way and for sound purposes.

Subject to agreement among the group members, the saving-credit group itself will decide who will borrow and if a rate higher than the sanitation loan interest is to be applied. Either way, the interest rate should be lower than the Bank lending rate but the same or higher than the interest rate for sanitation loan. This money can be managed within the group or at the phuong level. The income generating loan term is decided by each borrower but it should not be more than 24 months.

**9.3 Monitoring, Supervision and Reporting****Monitoring and supervision**

A management committee for the revolving fund at the city level supervises progress and implementation of the Fund on a continual basis or three times per month.

District Women's Unions regularly support City Women's Unions in supervision work in each phuong.

Management committees at phuong/commune level regularly monitor and supervise activities and the saving-credit group work and progress.

**Reporting requirements**

Monthly reporting is required at the phuong level. The CWU will submit quarterly progress reports including revolving cycle, physical progress, financial management and other relevant progress indicators to the SADCo, IDA and Finnida, perhaps also to the Project Consultant.

A Follow-up system on each level will be developed and registered to cover account books to monitor savings, interest income, the principal collections and the revolving cycles.

**10. GETTING ORGANISED****10.1 Before Disbursements**

The following steps will be undertaken to set up the Fund and to start operations:

1. Identification of the project area for project implementation phases in conjunction with SADCo. It is estimated that there are 10 phuongs to join the first revolving cycle.
2. Establish revolving fund management committee at the city and phuong levels.
3. Investigate and establish demand to take loan for sanitation, potential borrowers and respective needs in each phuong, as well as the household's sanitation situation (see annex 2). Based on the result of investigation, borrowers will be classified into different saving-credit groups. It is proposed that each group consists of 12 to 15 members.
4. Establish saving-credit groups
5. Organize first group meetings to discuss environmental issues, project activities, rules and operational regulations. The Groups also decide internal group rules and regulations, select heads of groups and group accountants. The borrowing procedure should be clarified in the meeting among the group members. Related documents are as follows
  - Loan application form with signatures of the phuong Women's Union and the borrower, notarised by the People's Committee
  - Household demand assessment form; It is also possible to build a lane tank among many households
  - Borrowing plan for construction of new or improvement of existing household sanitation facilities. If borrowers want to take additional loan for household income generation, they have to submit a feasible income generating plan
  - Loan agreement including a commitment to follow project operation rules and a repayment plan.
6. A borrower list and loan documents in each phuong will be completed
7. Training courses for the management committees, heads of groups and especially for the borrowers, will be organized on the following topics
  - introduction of the project objectives and their importance,
  - people's awareness on environment issues,
  - mechanism of community participation in environment and sanitation activities.
  - choice of sanitation technology options appropriate to different households
  - loan fund's rules, operation procedures and clarification.
  - guidance to the borrowers on loan agreements
8. Revolving Fund Management Committee shall receive the loan application, decide and if positive, approve funding. After finishing the selection and approval procedures, contract signing and fund reimbursement to each borrower can take place.

Proposed organization chart for implementation sanitation revolving sub-loan is presented in Annex 3.

## **10.2 Disbursement and Repayment Procedure**

### **Disbursement procedure**

Disbursement from the City Women's Union to Phuong Women's Union is based on a confidence guarantee mechanism. The Phuong Women's Union in its turn, shall disburse the loan funds to each borrower at the presence of the City Women's Union.

### **Interest payment**

Interest payment must be made on monthly basis from the saving-credit groups to the Phuong and will be sent to City Women's Union as proposed interest payment allocation, (described in the Project's operational rules).

Phuong Women's Union will be responsible for monthly principal collection, subsequently to be sent to the City Women's Union. City Women's Union will put this money to the bank account thus making further borrowing possible.

## **11. PROJECT MANAGEMENT**

### **11.1 Project Management Board at City Level**

The city level board is the highest organ responsible for managing the Fund. It will be established and chaired by the CWU comprising representatives of city authorities, SADCo, accountants and secretaries. It is optional to appoint further representatives, like donors' or project consultant's representatives, training and information staff, etc.

#### **Tasks:**

- To implement, manage and supervise the revolving fund facility.
- To design and conduct or commission an examination on the need to take a loan.
- To design and prepare loan documents, accounting and reporting system.
- To maintain accounting and recording system for all transactions.
- To implement or commission training activities at all levels including borrowers.
- To guide, monitor and supervise project activities in the phuongs and to's as well as among saving-credit groups along with the borrowers.
- To report and evaluate project progress and implementation of outputs.

### **11.2 Management Committee at Phuong and To Level**

The Management Committee at phuong and to level will be chaired by the Women's Union representative comprising of accountant, assistant, auditor, secretary, and a representative of the People's Committee.

#### **Tasks:**

- Arrange for the implementation, checking and supervision of project activities in each phuong under the guidance by the City Management Board.
- Direct management of lending activities in each phuong
- Giving information about the project objectives and contents
- Guidance to the households in using funds for the right purposes
- Coordinate for the technical inspection of the sanitation plans with SADCo
- Maintaining saving-credit group meetings according to the rules.
- Monitoring and supervising grass root level activities for the credits and saving, for construction of new latrines and septic tanks as well as their connection.

- Managing accounting system and documents in accordance with project regulations to ensure regular reports to the City Management Board.

### **11.3 Saving-Credit Groups**

Each saving-credit group has one head and vice of the group who will be responsible for all group activities, managing loan and repayment of each borrower in the group and especially the construction or improvement sanitation facilities of the group members.

#### **Tasks:**

- To organize borrowers in the groups following project's operational rules;
- To identify the rights and responsibilities of each borrower as loan users and group members.
- To maintain regular meetings of the saving-credit groups
- To collect monthly savings, interest payments and principal as per the regulations.

### **11.4 Financial Management**

Revolving fund management board at the city will establish a special account for the revolving sub-loan. The donors will contribute funds to this account. The management board will be responsible to make the statement of expenditures to SADCo and to the donors.

The revolving fund Management Board will be responsible to implement and manage the fund.

The fund has following principal features:

*Operating costs USD 150 000*  
*Revolving Fund itself*  
*Contingencies USD 150 000*  
*Interest and risk funds*

Management committees at the phuong levels will be directly responsible in their respective phuongs for managing the revolving fund, for monthly savings and for the interest fund. Each entry will be recorded in the accounts, strictly following project bye-laws (to be drafted) and on a monthly basis sent to the city level. After finishing an entire fund cycle, phuong management committees have to reimburse the funds to the City Management Board.

Saving-credit groups collect monthly savings, interest, principal payment and send it to phuong management committee following their respective regulation.

## **12. DEMAND TO TAKE LOAN AND PROJECT COST**

### **12.1 Estimated Demand to Take Loan and the Revolving Cycles**

**The first cycle:** from 2000 to 2002 it is estimated that there will be 2000 borrowers with a total of four billions dong of funds disbursed. During the first two years, 30 saving-credit groups are expected to be established in 10-15 phuongs.

**The second cycle:** from 2001 to 2003 it is estimated 2500 borrowers will require five billions of fund disbursements

The third cycle: from 2002 to 2004 an estimate of 2000 borrowers, requiring about four billions of disbursed funds

*The total revolving fund is 13 billions, however the actual fund is about 9,66 billions (700 000 USD=9,66 billions dong). It will be used for the first and second cycles. The third cycle is made possible by principal repayments in the first and second cycles*

## 12.2 Revolving Fund Project Cost

The following table is the proposed fund budget:

Table 4. Proposed budget for revolving fund

No	Expenditure	USD
1	<i>Working capital</i>	700 000
2	<i>Contingency</i>	150 000
3	<i>Operating cost</i>	
	Overall program management:	
	Analysis of situation	4 500
	Project Management activities	3 480
	Meeting and annual evaluation	10 650
	Monitoring and Supervision	2 200
	Incentives for project staff	8 760
	Training	
	At city and phuong, to, groups	18 240
	Borrowers	19 800
	Develop training materials	1 960
	Workshops	3 500
	Transportation	12 500
	Printing costs, book-keeping, other	14 780
	Office costs	25 590
	Study visits	10 000
	Contingency	14 000
	<i>Sub-total for operating costs</i>	150 000
4.	TOTAL	1 000 000

## 13. AFTER ALL CYCLES

After three cycles, it is assumed that eventual losses have been covered according to the rules from the provisions for the use of the interest income. The capital therefore, remains intact. The management committee will decide if the funds are to be used for public sanitation facilities in schools, hospitals, markets, etc. or further cycled. Or the fund may be earmarked exclusively for income generating purposes.

## PART D-- ALTERNATIVE SOLUTIONS AND CONCLUSIONS

### 14. TECHNICAL ASPECTS

To improve the sanitation and environment conditions in Haiphong the following options can be identified:

- Option 0. Do nothing (no wastewater treatment)
- Option 1. On-site treatment (e.g. septic tanks)
- Option 2. Local wastewater treatment plants
- Option 3. Centralised wastewater treatment

The main features of each option are discussed below:

#### Option 0 (do nothing)

- The existing situation continues
- No investments in the short run
- Environmental problems will worsen
- In the long run big investment are needed to improve the environmental situation
- Does not improve public awareness
- Not acceptable to the World Bank (Vietnam – Sanitation Project, Haiphong Sub-component)

#### Option 1 (on-site treatment)

- Septic tanks are the only feasible on-site treatment alternative in Haiphong
- Septic tank system provides possibility to solids free system, which is very suitable for the conditions of Haiphong (flat topography and small sewer slopes)
- Limited space for construction may cause problems
- Regular operation (desludging) is needed, poor accessibility may cause some problems
- Treatment and disposal of septage needs to be arranged
- Public awareness of environmental issues can be improved
- Required by the World Bank in connection with Vietnam – Sanitation Project, Haiphong Sub-component

#### Option 2 (local treatment plants)

- Wastewater has to be separated from stormwater
- Wastewater treatment plants have to be constructed
- Some pumping stations may be needed
- Suitable land area close to the sewerage area may be difficult to find
- Treatment results depend on the selected treatment method
- Considerable construction costs
- Operation of treatment plant requires skilled personnel (depends on the selected treatment method)

#### Option 3 (centralised treatment)

- Wastewater has to be separated from stormwater
- Separate sewer networks or interceptor sewers have to be constructed
- Several pumping stations are needed
- Wastewater treatment plant/plants have to be constructed
- Treatment results depend on the selected treatment method
- Treatment and disposal of sludge needs to be arranged
- High construction costs
- High operation cost

- Operation of treatment plant requires skilled personnel
- Large land areas are required (depends on the treatment method)
- Not affordable in Haiphong in the near future

As centralised (or even local) wastewater treatment seems to be unaffordable for Haiphong in the foreseeable future, septic tanks are considered the only feasible option to improve the environmental condition in the short run. Septic tanks require, however, regular desludging to provide reduction of pollution load. To be efficient, the septic tanks have also to be correctly dimensioned and constructed. The advantages and disadvantages of septic tanks in Haiphong conditions is discussed in more detail below

Table 5. Technical feasibility of septic tanks in Haiphong

	<i>Advantages</i>	<i>Disadvantages</i>
<b>Implementation aspects</b>		
- Easy construction	++	
- Moderate construction costs (compared to centr. treatment)	+	
- Correct dimensioning is needed for proper operation		-
- Can be implemented by households themselves	+	
- Limited space available along the lanes and alleys		--
<b>Operation and maintenance aspects</b>		
- Simple to operate	+	
- Reliable operation with elementary maintenance	+	
- Requires regular desludging		-
- Poor accessibility along lanes and alleys		--
- Requires special equipment		-
- No current practice of regular desludging		-
- SADC's capacity needs to be strengthened		-
- Private capacity available for present needs	+	
- Poor public awareness of preventive O&M		-
<b>Treatment efficiency of septic tanks</b>		
- Reduces solids in sewers (up to 65 %)	+	
- Improves environmental condition	+	
- Provides preliminary on-site treatment (BOD removal up to 35 %)	+ <sup>1)</sup>	- <sup>2)</sup>
- Low nutrient and bacteria removal		-
- No effect on industrial wastewater (except solids and BOD)		-
<b>Septage treatment</b>		
- Treatment of septage included in 1B project	++	
- Causes additional operation costs		-
<b>Legislation and regulations</b>		
- Construction required in new buildings acc. to regulations	+	
- Operation (desludging) not required		-

<sup>1)</sup> Compared to the present situation (no treatment)

<sup>2)</sup> Compared to advanced treatment (biological/chemical treatment)



## 15. FINANCING OF SEPTIC TANK CONSTRUCTION

The construction of septic tank requires considerable investment at a household level. Establishing a revolving fund is one alternative to support the customers in financing the septic tanks. The following financing options can be identified:

- Option 1 Customers' own financing (savings, loan etc.)
- Option 2 Revolving fund
- Option 3 Direct subsidies (partly/fully subsidised)

### Option 1 (Customers' own financing)

- Few people have adequate savings
- Loan from private market is expensive
- Public banking/loan system is not well developed in Vietnam
- Poor population cannot afford

### Option 2 (Revolving fund)

- Is consumer friendly bank
- Can match the needs of poor better than traditional bank
- Promotes savings
- Demanding administration and management
- The poorest people may still need subsidies

### Option 3 (Direct subsidies)

- Financing sources need to be identified
- Low commitment to the project among the customers
- Demanding administration and management
- Careful selection of target group needed

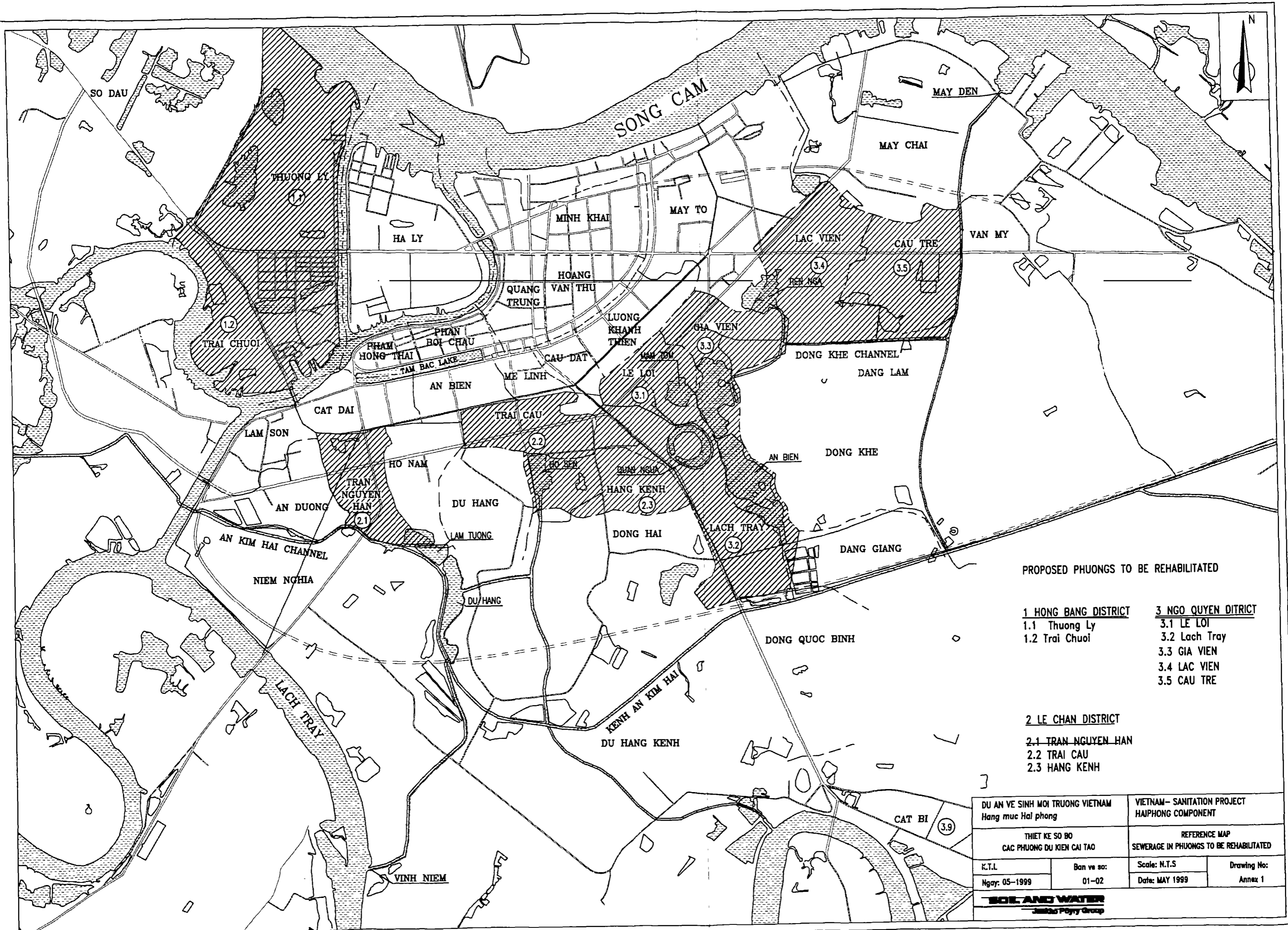
Table 6 summarises the advantages and disadvantages of sanitation revolving fund concept in Haiphong conditions.

Table 6. Revolving fund aspects in Haiphong

	<i>Advantages</i>	<i>Disadvantages</i>
<b>Organisation</b>		
- Vietnamese authorities have experience in revolving funds	++	
- No experience in sanitation revolving funds		-
- Competent implem. organisation exists (Womens' Union)	++	
- Selection of right target group may be difficult		-
<b>Public awareness and willingness to take loan</b>		
- Public awareness of environmental issues shall be improved		-
- Willingness to take loan for sanitation seems to exist	+	
- Sanitation revolving fund does not generate revenues or savings in running costs		-
<b>Affordability</b>		
-Pre-savings are required	+	
- The poorest people may not be able to pay back loan		-

**PART E- ANNEXES**

**Annex 1: Project area for the proposed sanitation revolving fund**



PROPOSED PHUONGS TO BE REHABILITATED

- 1 HONG BANG DISTRICT
  - 1.1 Thuong Ly
  - 1.2 Trai Chuoi
- 2 LE CHAN DISTRICT
  - 2.1 TRAN NGUYEN HAN
  - 2.2 TRAI CAU
  - 2.3 HANG KENH
- 3 NGO QUYEN DITRICT
  - 3.1 LE LOI
  - 3.2 LACH TRAY
  - 3.3 GIA VIEN
  - 3.4 LAC VIEN
  - 3.5 CAU TRE

DU AN VE SINH MÔI TRƯỜNG VIỆT NAM Hang muc Hai phong		VIỆT NAM - SANITATION PROJECT HAIPHONG COMPONENT	
THIẾT KẾ SỐ 80 CÁC PHƯỜNG DỰ KIẾN CẢI TẠO		REFERENCE MAP SEWERAGE IN PHUONGS TO BE REHABILITATED	
K.T.L	Ban ve so: 01-02	Scale: N.T.S	Drawing No: Annex 1
Ngày: 05-1999		Date: MAY 1999	
<b>BOE AND WATER</b> Julius Pöyry Group			

**Annex 2: Demand for Loans for Sanitation  
Willingness and Ability to Repay**

*Study on demand to take loan for sanitation  
Willingness and ability for repayment in Hai Phong city, Vietnam*

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**THE SOCIALIST REPUBLIC OF VIETNAM**  
**Haiphong People's Committee**

**THE REPUBLIC OF FINLAND**  
**Ministry for Foreign Affairs**

**Haiphong Water Supply and Sanitation Programme  
Vietnam - Sanitation Project, Hai Phong Sub-Project**

**DEMAND FOR LOANS FOR SANITATION  
WILLINGNESS AND ABILITY TO REPAY**

**July 1999**

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## **1 INTRODUCTION**

Many households in Hai Phong do not have proper sanitation facilities. As in many other cities in Vietnam, environmental pollution is a severe problem. According to Sewerage and Sanitation Company (SADCO), which is responsible for sewerage and sanitation services in Hai Phong, approximately 30% of the population do not have proper individual toilets. Those households in the city of Hai Phong, who do not have a flushing toilet and sewerage connection are also relatively poor or middle income households. The households that have latrines with septic tanks that have been constructed inside users' houses make it difficult to gain access for emptying. Other latrines that have been constructed without septic tanks, are connected directly into the sewerage system.

The construction of new sanitary latrines and the improvement of existing septic tanks and toilet hardware need to be carried out simultaneously with the rehabilitation of sewers and the combined sewerage network. The combined sewerage in Hai Phong is not working properly because of the tremendous amount of solid material deposited in canals, coming partially from septic tanks and household waste.

Facing environmental pollution, the Vietnam - Sanitation Project has been approved to support sanitation investment in Hai Phong, Da Nang and Quang Ninh. This project will focus mainly on the rehabilitation and extension of primary and secondary drains and sewers and on solid waste collection. However it has also been proposed by project staffs and authorities that it will be necessary to improve on site sanitation to achieve a reduction in environmental pollution. Therefore, a proposal has been made to establish a revolving fund for sanitation that will specifically help low income households who have the need for loans to improve the sanitation conditions in their homes.

Experience shows that there is no simple solution to financing sanitation for low income households. A number of reports exist containing information that shows the need to provide loans for sanitation. However, the revolving fund approach is still questioned by donors and the implementation organisation in terms of how to create the demand for sanitation, the willingness to borrow, assured cost recovery and the feasibility of implementation of these activities. It is necessary to study these questions in order to propose and implement the revolving fund for sanitation in Hai Phong successfully.

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## 2 EXECUTIVE SUMMARY

In July, 1999, a survey was carried out in 3 selected representative Phuongs in the project areas in the city of Hai Phong. The survey was aimed at inquiring into the demand for loans to improve environmental and hygienic conditions in the houses of the residents of Hai Phong. The following results have been obtained as a result of the survey.

### **Demographic and socio-economic situation**

The three wards had a combined population of 39,906 living in 10,296 households as of April 1999. The survey was conducted on 300 households with 1,230 people, averaging 4.1 people per household. The monthly average per capita income is VND 262,700 or VND 3, 152,000 a year (roughly USD 228). The survey income level is equivalent to the USD 220 annual average GDP per capita in Viet Nam.

The survey results show that 2.3 percent of the interviewees rank as extremely poor; 12.1 percent, poor; 14.1 percent, fair; 40.9 percent, rather well-off, and 30.5 per cent, well-off.<sup>1</sup>

### **Presentation on sanitation and sewerage system**

*Situation of latrines:* A majority of the population (86.3 percent) have latrines in their houses, with septic or semi-septic latrines accounting for 82.6 percent, double-tank latrines making up 1.9 percent, bucket latrines, 0.4 percent, sulab latrines, 2.3 percent, and simple latrines, 12.7 percent. The remaining households do not have latrines at their houses and have to use public or neighbours' latrines. This group of people does not have latrines because either they could not afford them (74 percent) or they are living in tiny houses (7.3 percent) or in temporary houses (18.7 percent). Most of the public latrines are bucket ones and built over 20 years ago. Worse still, no office or individual takes the responsibility to repair those latrines, which are in very poor condition and are causing severe environmental pollution to surrounding residential areas.

*Situation of sewerage systems:* Over half of the survey families accepted the present situation of the sewerage system in their houses. The rest do not accept their houses' sewerage systems citing that these systems are always inundated as inter-block sewerage systems are clogged or blocked. Households' sewerage systems are in better condition as compared to residential areas' sewerage systems. However, only 29 percent of the interviewees considered the present condition of the residential areas' sewerage systems as acceptable, and 71 percent consider these present conditions unacceptable. Interviewees who accepted the present conditions are living in areas where their houses' sewerage systems are connected directly to the ward's sewerage systems. Other people are living in residential areas without sewerage systems or where the sewerage systems are often blocked. The degradation of the sewerage systems can be explained by the fact that a number of residential areas' sewerage systems were built a long time ago without being repaired or maintained. In addition, people's awareness of hygienic

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<sup>1</sup> people of the extremely poor group have a monthly income less than VND 100,000; of the poor group, between VND 100,000 and 150,000; the fair group, between VND 150,000 and 200,000; the rather well-off group, between VND 200,000 and 300,000; and the well-off group, over VND 300,000. These classifications are subject to variation from one locality to another.

environmental conditions was low, therefore they put rubbish and human and animal manure into the sewerage system.

### **Water supply and rubbish collection**

*Water supply:* Most of the survey households use running water (95.3 percent) with 66 percent of households having water taps at their houses, 16 percent pump water from public tanks, and 17.5 percent take water from public taps. Households using water taken from drilled wells make up 4.3 percent. 80.4 percent of the households pay water fees based on measurement of water counters, while 5 percent of households pay monthly fixed fees, and 14.6 percent shared water fees with other households living in the same residential groups or areas based on the number of household members.

*Rubbish collection:* Rubbish is collected daily at a fixed time. Households pay rubbish collection fees to URENCO based on the number of household members.

### **People's awareness on improving sanitation conditions**

85.7 percent of the interviewees perceive the sewerage system and latrine have a great influence on people's living condition and health. Despite having a good understanding of these issues many people, for the sake of their own families, keep on building simple latrines which discharge manure into the sewerage system. Another reason for the popularity of this type of latrine is the lack of financial resources for upgrading.

63 percent of the interviewees know that URENCO is the office responsible for collecting rubbish while only 31.3 percent of them know SADCO as the responsible office for the city's sewerage system. A number of people do not know which office is in charge of removing manure from latrines.

### **Demand to take loans for sanitation, and willingness and ability to repay**

Many interviewees say the necessity to upgrade the sewerage system is their first priority. Next is building and upgrading sanitary facilities in their houses. The third priority is installing running water pipes inside their houses.

A majority of the interviewees (99.3 percent) agreed that it is necessary to establish a fund to provide loans to local residents to enable them to upgrade home sanitary facilities. This group held that the establishment of such a fund is important and necessary. 77.7 percent of the interviewed households expressed wishes to borrow money from this fund to build or upgrade their toilets. 23.3 percent of the households did not wish to get loans from the fund for the following reasons: they had good latrines (60 percent), they were too poor to repay the debt (30 percent), they were living in temporary houses (4 percent), or they could afford to pay for improvements themselves.

Many of the interviewees expressed the wish to borrow between VND 2 and 3 million with monthly interest rates ranging from 0.3 to 0.5 percent during a period of between two and three years. Those wishing to borrow VND 2 million plan to build a latrine and upgrade the sewerage systems inside their houses. Many of those wishing to borrow VND 3 million plan to spend VND 1 million on upgrading both the inside and outside sewerage systems and use the remaining amount of the loan, VND 2 million, to build septic latrines.

Most of the interviewees expressed wishes to pay loan interest quarterly. Poor households agreed on two alternative debt payment schemes. They wish to pay the debt monthly over a two year period or once every six months in the amount of VND 500,000. The fair and rather well-off groups, who also wish to borrow VND 2 million, want to pay the debt twice annually in the amount of VND 1 million each. Those wishing to get a VND 3 million loan want to repay the debt over a three year period as follows: VND 500,000 at the end of the first year, VND 1 million at the end of the second year, and 1.5 million in the last year.

A majority of the interviewees shared the idea that the local women's associations should act as the fund managers as they are experienced in managing loans. However, they agreed that cooperation and assistance from the people's committees and mass organisations with women's associations in the wards is indispensable.

Following are some recommendations based on the survey results:

### **Recommendations**

Following are recommendations by the research group based on the above-mentioned conclusions:

- It is necessary to launch information, education and communication activities to raise people's awareness on hygiene at home, in residential areas and about the social environment in general. People should understand that environmental hygiene at home cannot be seen as detached from the hygienic conditions of their residential area and society itself. Legal education for the people should be promoted because despite perceiving that what they were doing was a violation of the laws, many people kept on doing it. Besides there was another group of people who did not know their actions were illegal, therefore they continued the action. There should be an agency responsible for providing consultant services on environmental hygiene to households and for helping them solve their problems in this area.
- Discussions on loan provision regulations issued by lenders or group regulations among borrowers with the people should be held prior to the provision of loans. Participation of the people in planning and implementation steps will be an insurance for proper loan granting and debt payment.
- A capital management and supervision board with the participation of the Women's Union, the People's Committee and the head of the residential group as well as other mass organisations should be established. Members of the board will be required to hold discussions to define each member's responsibility to ensure the successful implementation of the project and to provide assistance to each other when needed. Moreover, the people should know the obligations and rights of each member of the board so they can come to the right person to ask for help if they have problems.
- It is necessary to mobilise participation of the people and the local community in environmental protection activities as it helps reduce cash contribution by households.
- Assistance policies should be applied for extremely poor households. A number of households should be granted with a sum of capital and other sums should be non-interest loans which can be paid in several installments. The selection of these households will be made by the community.
- Different sanitation options for some HH's that cannot build private septic tanks due to lack of living areas to hold them should be proposed. This is one method for

decreasing the numbers of public latrines which make it difficult for the community to protect the environment.

### **3 STUDY OBJECTIVES AND METHODOLOGY**

#### **3.1 Study Objectives**

The general objective of the study is to explore the demand for loans for sanitation, the willingness and ability to repay the loan, and the feasibility of implementation of a revolving fund proposal, especially for low income households.

The specific objectives are described and analysed here:

- Demographic and socio-economic condition of the population in the project area
- Existing sewerage and sanitation and water supply situation and identification of main problems in relation to sanitation
- People's awareness and behaviour regarding the environment where they live
- Demand to take sanitation loans and willingness and ability to repay
- Suggestions to encourage low income households to improve sanitation facilities.

#### **3.2 Study Method**

As experience shows, a combination of quantitative and qualitative study methods are strongly recommended for use in studying the ability and willingness of people to borrow and repay funds for sanitation purposes. In this study, household questionnaire surveys and a number of focus group discussions and in-depth interviews have been carried out.

Household surveys were conducted during two weeks of June, 1999 in 3 selected representative Phuongs in the project area with different economical levels represented. Some main features related to the household surveys are described below:

- Selection of 3 representative Phuong: One Phuong (Tran Nguyen Han) represents middle and better income levels, one Phuong (Cat Bi) is considered as representative of the relatively poor areas and the other Phuong (Trai chuo) is representative for very poor areas. The selection of Phuongs for study has been discussed with the project management board and Phuong people's committees.
- Household survey sample: 300 households have been selected randomly in 3 Phuong. Different income-groups were randomly chosen
- Household questionnaires have been developed and tested before conducting the actual survey. The questionnaire is comprised of closed and open questions on socio-demographic characteristics, existing sewerage and sanitation, people's opinions and behavior on these issues, the ability and willingness to borrow funds in general and specifically for sanitation (see detail in annex 2).
- The household survey was conducted over 2 weeks. Interviewers and supervisors were selected from the Women's Union in the city and Phuong and were trained intensively for 2 days.
- Entering data and processing have been done in the field and more detailed analyses were done in Hanoi using EPI-INFO version 6.0.

In order to investigate people's beliefs and attitudes toward sanitation and their ability and willingness to repay a loan, a qualitative method was used in this study. Specifically, in-depth interviews with different types of households, key-informant interviews, and focus group discussions were used to generate ideas and cross check information from different angles in order to get accurate data and results (in-depth interviews and focus group discussion checklist in annex 2). The number of interviews and discussions conducted in 3 Phuong is seen below:

- 12 in-depth interviews with different households of different incomes (very poor, poor, middle and better off income)
- 10 focus group discussions with various household groups, poor, middle and better off income and a group of Phuong representative authorities (mass organisations, head of the ward, people committee..)

#### **4 DEMOGRAPHIC AND SOCIO-ECONOMIC SITUATION**

##### **4.1 Demographic Situation**

*The average size of a household* found in the households survey is 4.1 people, which is equivalent to the household size in a random survey conducted in a ward in Hai Phong city by the Institute of Sociology in 1997. The figure is also equivalent to the average household size in Ha Noi announced by Women and Family Research Centre in 1998-1999.

Most of the households in the study area live in nuclear families (76.3%), while expanded families account for only 23.3 percent. This is similar to the lifestyles as compared to other urban areas overall. The gender ratio in the study population sample is more balanced, males, 47.3 % and females, 52.7 %. This ratio is similar to other city areas such as Ha Noi and Ho Chi Minh cities.

*Main occupation:* The main occupations in this area are government employee, retired and simple labour, and artisan. The occupational pattern indicated in this study shows that the main occupations in the city are very much dependent on the state-run sector. Businesses and/or services are seen in a very limited proportion.

*Table: Main occupation in the study area*

No	Occupation	Percentage %
1	Government employee	27.3
2	Retired	17.7
3	Military or police force	1.0
4	Trader, business	7.8
5	Housework	9.5
6	Invalid	8.5
7	Simple labour, artisan, unemployment	15.8
8	Other	12.4
Total	Total	

*Education:* Holders of tertiary or post-graduate certificates numbered 5.7 %. 37.6 % finished senior high school education. 40.7 % finished junior high school and primary education. 10.9% completed primary school education and 2.5 % are illiterate. All the three wards in the survey have been recognised by the Hai Phong Municipal Education and Training Department as junior high school education equivalent.

## 4.2 Socio-Economic Situation

### *Income and Expenditure*

Expenditure and income are two indicators used to measure the living conditions of households. They are also reference indicators for defining the number of households wishing to access bank loans and make contributions to the improvement of the sewerage systems.

According to the results of the survey, the monthly average expenditure per household is 940,369 VND and average per capita expenditure is VND 237,700. The monthly average per capita income is 262,700. Compared to the equivalent figures obtained in the survey conducted in the Dong Quoc Binh ward, VND 222,900 and VND 260,500, the newly gathered figures seem to be higher. However, these figures cannot be compared precisely as the survey conducted in the Dong Quoc Binh ward occurred two years ago, in 1997.

*Table: Monthly average expenditure scheme of households:*

Expenditure on	Monthly average expenditure of all groups	Share of total expenditures (%)
1. Food	664.816	70.7
2. House rent	15.246	1.5
3. Running water fee	18.522	2.0
4. Electricity fee	44.010	4.6
5. Rubbish collection fee	3.137	0.2
6. Security fee	1.419	0.2
7. Others	205.090	20.8

Spending on food accounts for 70.7 percent of the monthly income, and is the largest monthly expense. It is much bigger as compared to other monthly household expenses.

The figure on the monthly income is 1028,000 VND. The average per capita income and expenditure also indicates the living conditions as below well-off of the residents in the three targeted wards. The following figures can help define the monthly per capita spending scheme in the groups:

The annual per capita income of the people in the survey is equivalent to the national average per capita income of USD 220. So it is clear that the income level is lower than the average capita income of the urban population.

The main source of each household's income is the monthly salary. This includes pensions, secondary trading and small business income as the main sources for household income. Saving money is also one of the main income sources for most of the households in the city.

Table: Main income sources:

Income sources	Monthly average amount of all groups
Salaries, including pensions	672.105
Running market booths or small shops	449.901
Husbandry activities	148.974
Production, trade and services	583.846
Saving interest	245.000
Others	386.076

*Classification of household's income:* Following are the results of the classification on household income (in VND) according to household's assessment.

Monthly per capita income	Extremely poor, < 100,000	Poor 100,000-150,000	Fair 150,000 - 200,000	Rather well 200,000 - 300,000	Well-off 300,000+
Number of HHs	7	36	42	122	91
Rate	2.3 %	12.1 %	14.1 %	40.9 %	30.5 %

Note: 2 cases are missing.

The classification of poor, fair, or rather well-off households is not the same in the three wards. The classification categories vary from one ward to another. The economic classification of households is made mainly based on the category sets introduced by the Ministry of Labour, War Invalids and Social Affairs in conformity with the specific conditions of each locality as instructed

Additionally, the research group applied the classification method according to the living conditions based on the self-assessment given by interviewees and evaluation by interviewers.

Following are the results:

Table: Living condition assessment by households and interviewers:

Group	Form rate (%)	
	Self-assessment by interviewees	Assessment by interviewers
1. Well-off	2 (0.7 %)	6 (2.0 %)
2. Rather well-off	20 (6.7%)	49 (16.3 %)
3. Fair	160 (53.3 %)	138 (46 %)
4. Poor	92 (30.7 %)	86 (28.7 %)
5. Extremely poor	26 (8.7 %)	21 (7.0 %)

The results indicate that 272 of the 300 interviewed households (90.7 percent) gave the same living condition assessment as that of the interviewers. In general, households had a tendency

to scale down their living conditions when giving self-assessment as compared to the evaluation made by the interviewers. This trend can also be observed in other surveys.

#### *Housing situation*

Following are the figures on housing of residents in the three wards of the survey:

Ownership	Number of houses	Rate (%)
Land Administration Office	67	22.3
State Offices	27	9.0
Individual	195	65.0
Individually rented	9	3.0
Others (borrowing, illegally built)	2	0.7
Total	300	100

The figures indicate that the number of houses under the control of the land administration office or State offices is lower than the number of houses under individual ownership. This is because, in recent years, the Government has transferred ownership rights to households. This transference reflects the hygienic conditions of residential areas concerning toilet and sewerage as follows: a number of households obtaining ownership rights either repaired or built toilets inside their houses. Meanwhile, households living in individually rented or lent houses did not invest in repairing toilets and sewerage systems. Households living in houses under the control of State offices usually use residential area or public toilets. Problems relating to residential area or public toilets will be further presented later.

## **5 PRESENT SANITATION AND SEWERAGE SYSTEM**

### **5.1 Existing Sanitation and Sewerage Situation**

#### *Existing latrine situation*

86.3 % of households in the study areas have latrines. However, latrines without septic tanks, flushing directly into the sewerage system account for up to 12.7 % if these latrines. Following are the survey's data on the existing latrine situation of household families:

Types of latrine	Number	Percentage %
1. Septic/semi septic	214	82.6
2. DVC	5	1.9
3. Bucket	1	0.4
4. Sulabh	6	2.3
5. Simple flush without septic	33	12.7
Total	259	100

The results of the survey showed that a majority of the household families have their own latrines, with septic and semi septic latrines being the most common types. Participants of the



group discussions and the in-depth interviewees said that they built two-tank latrines. Some families living in concrete or newly built houses had three-tank latrines. The household families having three-tank latrines are often relatively well-off. Most average and fairly average income families had two-tank latrines.

Bucket latrines are viewed by many people as unacceptable. They said: "*Only farmers make use of manure. Bucket latrines cause environmental pollution. In the past, bucket latrines were acceptable as septic latrines had not been introduced and houses had much more space with a smaller population. This type of latrine has become unacceptable nowadays. My family has four people in it. We are living in a 24 sq. m. house with a yard and a kitchen covering another 10 sq. m. We cannot stand a bucket latrine. Neither can our neighbours.*" (Interviewee: Mr. H living in Cat Bi ward). DVC latrines are also viewed as inconvenient for the urban population. Apart from hygienic issues, DVC latrines require the use of ash, which is not available as the urban population uses coal and electricity for cooking. In addition, a DVC latrine is not space saving. Septic and semi septic latrines are the common choices of urban families.

However, building a septic latrine is not a simple matter for low income families. They prefer a "simple type of latrine". This type of "latrine", manually flushed and seemingly hygienic, is often built inside the house. It consists of a toilet bowl, which is connected directly to the resident neighbourhood or Phuong sewerage system by a piece of pipe. Low income families often choose this type of latrine. During group discussion and in-depth interviews, those having simple latrines said they knew the construction of this type of latrine was wrong and illegal. However, they felt comfortable and hygienic with simple latrines.

Forty-one interviewed families (13.7%) said they did not have a latrine. Most of these families used public latrines or latrines of their neighbours'. When asked why they did not build a latrine of their own, 74 percent responded that they could not afford it. 7.3 percent attributed it to space shortage or that their houses were temporary ones

**Disadvantages of having no latrine:**

It is extremely inconvenient when using a neighbour's latrine. The public latrine is so dirty that you have to take a bath immediately when you get out. There are so many inconveniences when using a neighbour's latrine, especially when they are having special events such as a death anniversary or a wedding ceremony. Usually, we have to spend some time chatting with our neighbours before using their latrine. I myself can stand it. However, it is very odd when we have guests. We could not afford a latrine until last year. I decided to borrow some money to build a latrine for my children. It is a simple latrine with a concrete tank linking to a sewer. My neighbour helped me build the latrine. That was why it cost only 1.2 million Vietnamese dong. However, I have yet to pay the debt.

*Interview with Mrs. D, head of a poor household in Tran Nguyen Han ward*

Public latrines are still in use in all three wards in the survey. These latrines are shared latrines built for a living quarter or a group of families. Some of the public latrines were built back in the 1960's, such as those in the Cat Bi ward. The remainder was built from 1974-1977. Following are data on public latrines in the survey ward

Tran Nguyen Han	5 groups	25 latrines *
Cat Bi	22 groups	196 latrines
Trai Chuoi	1 group	18 latrines

\* Excluding the number of public latrines at the back of the An Duong market for market shop keepers and market goers.

The Cat Bi ward has the highest number of public latrines (196 latrines in 22 residential groups). Public latrines can be septic or bucket ones as those in the Tran Nguyen Han ward. However, all of the public latrines are extremely polluted as their tanks have not been cleaned or repaired for a long time, from five to ten years, some not even since they were put into use, according to interviewees. In addition, no organisation or individual takes the management responsibility over public latrines. The administrative authorities transferred the management responsibility to the local population, but no specific person has taken charge. This explains why all public latrines are extremely contaminated. In all survey areas, public latrines caused severe pollution to surrounding residential areas.

Participants of focus group discussions and interviewees in the three survey wards were of the same view that these public latrines should be demolished. These latrines do not only cause pollution for surrounding areas but also pose quarrels, thus causing public disorder at residential areas. Houses next to public latrines have had to raise their surrounding walls to prevent the penetration of malodorous fumes. However, demolishing these latrines will cause inconvenience for a number of people as they do not have any access to a latrine. Asked about assessment of the current hygiene conditions in their residential areas, 64 percent of the respondents said that the current status was bad, 9 percent said it is good, and 33 percent considered it acceptable.

Problems are also found at latrine outlets in several residential areas. Latrine outlets cannot be discharged to the ward's outlets as they became clogged at the entrance to the neighbourhood system. Undischarged waste water then spills over into yards, gardens, and pools as seen in Tran Nguyen Han ward, or the contaminated water floods the road. In some areas, waste water has malodorous fumes which forces local inhabitants to breathe heavily contaminated air.

**Stuck sewers cause pollution in residential areas**

The yard in my house is flooded even when it doesn't rain because the sewer is stuck. Waste, pig and human manure drift into the yard and their horrible odours are unbearable. I do not know where to lodge my complaint. I cannot move to a better place as I am very poor. Only God knows when I can get rid of the current situation.

*A female participant of a focus group discussion in the Trai Chuoi ward.*

*Existing sewerage situation*

Answers to the question "How do you assess your family's existing sewerage situation?" reflect households' sewerage systems as follows:

Existing sewerage situation	Number of answers	Rate (%)
1. Good	37	12.3
2. Acceptable	120	40.3
3. Bad	82	27.3
4. Not acceptable	61	20.3
Total	300	100

The figures show that more than half of the people asked, (52.3%), accepted existing sewerage systems, but only one-fourth of them said that such systems were good. In fact, sewerage systems have been repaired and upgraded in some places where households always dredge their sewerage for running through the city's sewerage system. In some major streets, submergence caused by rains has been reduced remarkably thanks to the upgrade of the sewerage system. The rest of the 47.6 percent of the people asked did not accept their sewerage systems because of the blockage among residential quarters' junction sewerage systems. In in-depth interviews and focus group discussions, interviewees said that they don't know how to overcome the situation because there are no ways for the sewerage to discharge waste water. In general, households' sewerage systems are much better than the region's sewerage system.

Following are answers for neighbourhood sewerage system:

Existing sewerage situation	Number of answers	Rate (%)
1. Good	20	6.7
2. Acceptable	67	22.3
3. Bad	120	40.0
4. Not acceptable	93	31.0
Total	300	100

Only 29 percent of people accepted the surrounding sewerage systems. The number here is much less than the similar question for household's sewerage system, which runs to the neighbourhood's system. They are living in an area that has good sewerage and connection systems.

Those who did not accept their sewerage systems make up 71 percent. Through focus group discussions and in-depth interviews, almost all interviewees complained that the sewerage systems were overused. Some sewerage systems built in 1979 have not been renovated or repaired yet (focus group discussion and household interview in Trai Chuoi ward). In some places, the sewerage systems that have deteriorated are not renovated when roads are upgraded. Worse still, many roads are built without sewerage systems and electricity light," said the leaders of Cat Bi ward in an interview. Moreover, sewers are too small to drain rainwater which causes stagnation (focus group discussion in Tran Nguyen Han ward).

Answering the question on the repair of sewerage systems surrounding the residential quarters in the last two years, 25 percent of people asked said "yes" and 86.7 percent said that they had to pay money for the repairs.

Whenever it rains, roads and houses are submerged. Particularly in the rainy season, stagnation, garbage and excrement in areas without drainage systems causes environmental pollution, in addition to flies and mosquitoes, which causes many diseases. About 257 (85.7 percent) out of 300 people asked recognised this situation. In residential quarters, sewerage pipes are very small so that people often have to dredge the sewers. However, the covers of these sewers were occupied, blocking the sewerage systems. Additionally, waste water from latrines to the sewerage system was blocked, causing the increase of environmental pollution.

In focus group discussions and household interviews, almost all interviewees said that they were anxious about the existing sewerage situation. About 71 percent of the interviewees held that the sanitation situation is very bad, while 18 percent said it is good, and 23 percent, acceptable. If there is no sewerage system, the construction of septic latrines partly solves the issues relating to hygiene in family houses and surrounding areas. It is better to build drainage systems including sewerage inside and outside the houses and septic latrines all at the same time.

In living quarters, the sewerage systems are insufficient and need to be regularly dredged. People, however, have illegally expanded their houses onto the surface of the outlet systems. The covers of the sewerage systems then cannot be opened because they are stuck. As a result, the situation has become increasingly worse. In addition, waste from toilets is also discharged into the sewerage systems, which are clogged, thus making the environment even more polluted.

## **5.2 Water Supply, Waste Collection and Disposal**

### ***Water supply***

About 95.3 percent of interviewed households use safe water and 4.3 percent living in Trai Chuoi and Cat Bi wards use water from drilled wells. Only one household in Trai Chuoi ward

uses rainwater for daily life. Of the households who use main water, 66 percent have water taps at home, 16 percent use water pumped from public tanks, and 17.5 percent have to carry water by shoulder poles. A number of households in Trai Choi ward still use water from wells or rainy water in the rainy season in order to save money.

Average water consumption of a household is about 10.3 cubic metres per month. Price for one cubic metre of water is 1,600 Vietnamese dong. Payment is calculated according to water meters. Among households using main water, 176 households (80. percent) pay money according to water meters, 11 households (5 percent) pay a monthly fixed charge and 32 households (14.6 percent) pay in groups. Some of the poorest households do not have to pay money for using water because other families using water from the same tank support them.

A cadre in a ward is responsible for water fee collection. He or she goes to all households in his/her ward to write down the amount of water used showing on the water meters and informs the user of the fee and the date of collection. Those who do not pay in time have to go to the collection places to pay. Water supply is cut off if payment is not made. Almost all households abide by this regulation, except some households do have the water supply cut off due to nonpayment of the fee. These households then pay for resumption of their water supply.

#### *Waste collection and disposal*

Considerable progress has been made in collecting rubbish in residential areas. Through in-depth interviews and focus group discussions we recognised that each residential area fixed a specific time for the dust cart to collect rubbish and almost all the inhabitants in the area responded to this regulation well. They carried their bags of rubbish to the dust cart in time for collection. Rubbish collectors are also street cleaners. People have to pay 1,500 Vietnamese dong/person/quarter for rubbish collection. Some poor households are exempted from this fee.

On assessment of the hygiene conditions in residential areas, 94.7 percent of the interviewed people said that current rubbish collection is acceptable, of which 19.3 percent said it is good. Only 6 percent considered it bad. The same results were collected from in-depth interviews and focus group discussions. However, a number of interviewees complained that rubbish collection time (from 14:00 to 16:00 hrs) in some wards is not convenient because at that time people have to go to work. Furthermore, rubbish collectors sometimes carry only rubbish shot by families. They do not collect bags of rubbish placed in front of houses. In such circumstances, some households have to ask their neighbours to shoot rubbish for them during working time. Worse still, some rubbish collectors do not clean streets well. Some hamlets are very dirty because of the shortage of rubbish collectors.

A number of problems have been raised during the process of collecting rubbish. For instance, people often dump their broken brick and stone in the streets or shoot in the public heap. These people think that rubbish collectors have to be responsible for the disposal of these items. In fact, broken brick and stone are not rubbish, so the collectors do not dispose of them. Another reason for the dirty status is the lack of rubbish collectors. The number of collectors in some wards has not increased in ten years while that of the inhabitants has increased rapidly. Moreover, the low income but high responsibility of the rubbish collector does not encourage collectors to work. To improve the situation, people asked the URENCO

to increase rubbish collectors' salaries or supply an allowance for them (according to focus group discussion in Cat Bi ward).

### **5.3 People's Awareness of Sanitation Improvement and Opinions on Responsible Organisation**

About 257 (85.7 percent) out of 300 people interviewed recognised that blocked sewerage systems, in addition to dirty toilets, caused environmental pollution. They also recognised that stagnation, rubbish, human and animal manure, flies and mosquitoes caused many diseases. However, it is difficult to work out concrete measures to improve these situations. Some people indicated an understanding of the importance of keeping their houses clean but did not care about the surrounding areas. Meanwhile some others can not afford the renovation of sanitation facilities although they understand the importance of sanitation improvement. In such circumstances, they have to accept the current situation of blocked sewers and public toilets. Other people who cannot accept public toilets have to build simple latrines in spite of violating laws, thus making the sewerage system more clogged and the environment of the residential areas more polluted.

In focus group discussions and household interviews, almost all interviewees said that they were anxious about the existing sewerage situation. About 71 percent of the interviewees held that the sanitation situation is very bad, while 18 percent said it is good, and 23 percent considered it acceptable. If there were no sewerage system, the construction of septic latrines would partially solve the issues relating to hygienic conditions in families' houses and surrounding areas. It is better to synchronously build drainage systems including sewerage inside and outside the houses along with septic latrines.

Although the flooding situation occurs so often, many people do not know which agency is responsible for the sewerage system and sanitation of the city (SADCO). The results of the survey showed that nearly 69 percent of the interviewees do not know the name of the responsible agency. Some know that there must be an agency in charge of the issue but could not define which one. That explained why whenever the sewerage system in their house or residential area got stuck or flooded, local inhabitants did not and still do not know the exact agency with which to lodge their complaints. Four percent of the interviewees said they hired someone to help them fix the problem. 40 percent said they reported the problem to the local people's committee. 17 percent said they reported it to the head of the resident group, complained to their friends or did nothing when dealing with blocked sewerage. Only 14 percent of the interviewees are able to report their problem to the responsible agency. Heated debates on defining the responsible agency have been observed during focus group discussions. Many of the participants in these discussions even said that there has been no agency in charge of managing the sewerage system. Others said that the ward people's committee was the sole organisation to help them deal with the problem.

Contrary to people's knowledge on the agency responsible for the sewerage system, most of the interviewees knew the name of URENCO, the establishment in charge of collecting rubbish. In some wards such as Cat Bi, the relationship between the local people and the rubbish collectors is excellent. Local residents knew the local rubbish collector's name as well as the quality of his/her performance (focus group discussions in the Tran Nguyen Han and

Cat Bi wards and in-depth interviews with households). However, some people do not know which company to call to have the latrine tank cleaned.

Residents in all three wards under the survey said during group discussions that they understood that a friendly environmental resident area should benefit them, both materially and spiritually. But, there is a gap between perception and the action of the people. Therefore, they have been faced with embarrassment for taking action toward improvement of living conditions. Providing consultant services to them in this field is necessary work, which is to be conducted by local authorities and mass organisations in the future.

In several wards with women playing a key role in social activities, the movement entitled "green, clean, beauty" has been implemented effectively. People have been encouraged to take part in growing trees, dredging sewerage systems, placing rubbish in the regulated places, and at the right time, killing mosquitoes and rats, and cleaning residential areas (focus group discussions with the leadership of the Tran Nguyen Han and Cat Bi wards). Other activities that might cause environmental pollution such as pig slaughtering or production of chemicals in these wards have been well controlled. Households involved in these activities have to prove their commitment to environmental protection and receive permits and guidance from pertinent agencies (reports by the Tran Nguyen Han ward People's Committee).

## **6 DEMAND FOR SANITATION LOANS AND WILLINGNESS & ABILITY TO REPAY**

### **6.1 Existing Loans Among the Community**

Discussions with poor and medium income groups show that people borrowing from each other in small amounts (about 20,000-30,000VND) within the community is fairly common. In order to solve daily living demands, they often borrow from friends or relatives, and no interest is imposed. In order to get bigger loans for business and investment into production, they take loans from a bank or a creditor, but these large loans (about one million VND and up) are still limited.

The survey results from 300 households regarding loans indicates that 220 households (73%) have not taken any type of loan. In fact, only 26.7% applied for a loan in the last year. Such households often request a loan size of more than 2 million VND. The threefold difference between those who did not take a loan and those who did take a loan also implies that there are not many big loans. Of course, it does not mean that 26.7 % of the households who applied for loans are poor because besides those who took loans for daily living expenses, there are also those who took loans for investing into production and business.

The following table shows more details about these households in the last year with their purposes for taking loans:

Purposes of the loan	% opinion
- Paying debt	3.1%
- Serving the daily life	17.2%
- Producing and trading	35.9%
- Solving urgencies in the daily life	42.2%
- Others (building, renovating house, purchasing motors)	1.6%

Thus, the households who borrowed money mainly spent the money on solving urgent problems concerning daily life or investing into production and business

By interviewing various households in depth, we found that inhabitants borrow money not only for investing into production or purchasing consumable products, but also for building or renovating their latrines. For example, a household at Tran Nguyen Han phuong borrowed 1.2 million to build a septic tank, and a household at Trai Chuoi phuong used the loan to improve a latrine.

When asked about interest on the loan, 82 of respondents say if they borrow money from their relatives or friends, they are not charged any interest. Only 18% say that they have to pay for the loan interest at the rate of 0.2%. Credit banks, mass organisations, and especially the Bank for the Poor and the Women's Unions often give loans at very low rates of interest (0.8%). Creditors often lend money with higher rates (1.2%). Discussion within the groups indicates that interest rates imposed by creditors can range from 2% to 4%.

Female participants of the groups agree that if a loan is used to invest into production, the rate of 0.8% as stipulated by Bank for the Poor and phuong Women's Unions is reasonable. If it is loaned for sanitary purposes or sewerage renovation, this rate is too high and they will not be able to borrow.

Decisions on borrowing money for the household are mostly made by women (53% of households), or both husband and wife (34%). Husbands make this financial decision in only 13% of the households. This percentage reflects a truth, that in many cases, women take more important roles in deciding upon the household expenditures and borrowing matters than men. The aspirations and ideas they set forth in discussion on the amount of the loan, the interest rate, and the loan cycle for sanitary renovations are often more detailed than men's. Such matters will be mentioned in more detail when writing about the willingness to take loans for sanitation of the household.

## **6.2. Experiences on Micro-Credit Management by Women's Union in Hai Phong**

The Women's Union is a public organisation and is active in credit loans in the community. The following are some examples of the loans the Union has made, and their management experiences in terms of lending, as informed by Chairwomen of phuong Women's Unions :



- "*Vay tin chap-Guarantee on confidence*"<sup>2</sup> is carried out by Bank for the Poor and then re-lent to poor households to do business and push up the family economy in such things as breeding, servicing or minor trading. Interest rates for this fund are stipulated at 0.8% per month and paid monthly or deferred. The largest loan size is 2.5 million with a one-year cycle (for breeding livestock). Capital will be refunded after one year.
- *Saving Fund for Poor Women* : This fund is mobilised from the contributions of individuals, agencies and social organisations in the community

Interest for each quarter depends on the decision made by each phuong Women's Union. For instance, Chairwoman of Cat Bi Women's Union said, "Interest for the quarter is up to the agreement between the creditor and the recipient of the loan, but it is stipulated not to exceed 1.5% per month. We are successful in carrying out this service; we often question the purpose of the loan so that receiving the capital and interest back is ensured. Therefore, there are more and more people who believe in and authorise us to manage their money. There are also good people who lend money without interest" (key interview).

Refunding capital and interest amount varies from one region to another. At Tran Nguyen Han phuong, interest is often paid in 3000 VND a day in compliance with the granted loan. "This form of repayment is the most appropriate for poor people since they cannot refund the large amount of 100,000VND just once if it is collected by month" said the Chairwoman of phuong Women's Union.

At Trai Chuoi phuong, Women's Union hosts a fund of 50 million VND from the National Fund for Job Placement, in which the People's Committee is chaired so that their members can take loans for breeding pigs or trading on a minor scale. Stipulated interest for this fund is 0.8% (set by the State). The loan cycle is one year for breeding livestock. The largest loan size is 2.5 million VND. Interest is collected quarterly and capital is refunded after one year.

Additionally, the Women's Union also manages the SEARAC Credit Loan (sponsored by Research Centre of South East Asia, Ministry of Foreign Affairs of the U.S). These loans are for repatriated refugees and poor members of the community. The largest loan for repatriated refugees can be 5 million VND, the smallest is 2 million VND. Such loans can be used in economic activities to increase their income. Stipulated interest is 1% and is paid monthly. The loan cycle is one year. Those who manage the loans best can take a loan in three cycles. For a one-year cycle, capital is paid first from the 8<sup>th</sup> month on, 1/5 of the capital is refunded in each month.

According to the Chairwoman of the phuong Women's Union, loaning to repatriates is very difficult to manage because they are inconstant, unsettled, and hate to be under any supervision. In combination with locality (People's Committee), Women's Union phuong monitors and delaying refunding, there has been only one repatriate asking for deferment in payment so far. All are refunded and start with the second cycle.

All the credit loans hosted by the Women's Union in the past several years at the phuong are surveyed and assessed as excellent successes. Capital and interest are refunded fully, helping household borrowers get capital, create jobs, and increase income for themselves.

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<sup>2</sup> Use one's own prestige to loan without mortgaged assets

(interview key news suppliers - Chairwomen of Women Unions of Cat Bi, Tran Nguyen Han, Trai Chuoi phuong and two Deputy Chairwomen of Women Union of the city).

The expediting and success of many loan projects for economic and community development show that Women's Unions at all levels are experienced and capable in managing and withdrawing capital, and the local government and people trust them.

### **6.3 Demand to Take Sanitation Loans**

On surveying the households, the study team asked households to note the urgencies/priorities for improvement/construction of the infrastructure system in their neighbourhoods and got results as follows

Table: Percentage of households who are given priority for improvement of some infrastructure items in the neighbourhood.

No	Characters	Top priority (number of household)	%
1	Road inside neighbourhood	13	4.3%
2	Sewerage system	140	46.7%
3	Drainage system	7	2.3%
4	Install water connection pipe at home	26	8.7%
5	Household sanitary facilities	95	31.9%
6	Housing condition	14	4.7%
7	Waste and rubbish collection and disposal	3	1%
8	Development of park and green areas	0	

The above table shows that those who consider the improvement/construction of sewerage system as the highest priority account for 46.7%; those who presume the improvement/construction of private latrines as the top priority take up a lower proportion (31.7%). The third priority is to install water connection pipes at home (8.7%), but this index indicates a high differential as compared with the first two priorities. Interviewees who responded with other priorities account for an unremarkable percentage, or not at all (e.g.:for development of park and green areas).

Focus group discussions and household interviews also got the same results that concentrate on serious degeneration and the blocking up of the sewerage system. An interviewee of the medium household group of Trai Chuoi phuong said:

**" Sewerage system renovation is given the top priority"**

"At present, there are many essential demands for our neighbourhood such as connecting water pipes to households, building up septic-tank latrines or improving/re-constructing houses, etc. They are all vital and necessary to do forthwith. But in my opinion, if the sewerage system of our neighbourhood cannot be renovated or improved, all is in vain. Latrines will be clogged up, and roads and houses will be flooded with mud and rubbish if it rains. So sewerage system renovation must go ahead and be given the top priority at this time".

However, in focus group discussions and HH in-depth interviews it was found that priority varies from one living quarter to another. For example, there are many households at *cum* C of Trai Chuoi phuong as well as *cum* D2 of Cat Bi phuong using public latrines, they therefore desire to construct their own latrines. Households along the railway line from Haiphong to Hanoi of Tran Nguyen Han phuong long for a newly built sewerage system because such a system has not ever existed in this area, etc. Generally, participants of focus group discussions all emphasize that the improvement/construction of further sewerage system is a priority over all others, especially the construction of septic-tank latrines and good neighbourhood sewerage systems.

The below table analyzes the relationship between income of the rich and the poor and their choice of the top priority.

Income group (per capita / month)	Issues given top priority							Total of households
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
Under 100,000 VND/month (very poor)	0	4	0	0	3	0	0	7
100,000VND to under 150,000VND (Poor)	1	10	1	4	<b>18</b>	2	0	36
150,000VND to under 200,000 VND (Medium)	1	20	0	3	14	3	1	42
200,000VND to under 300,000VND (Rather medium)	5	56	5	6	43	6	1	122
300,000VND up (better off)	6	50	1	13	17	3	1	91
Total of households	13	<b>140</b>	7	<b>26</b>	<b>95</b>	14	3	298

Missing 2 cases

In compliance with the above mentioned results, the poor group (with income of 100,000VND to under 150,000VND per capita) supports constructing latrines (5) rather than sewerage systems (number 2 in row). The remaining income groups (very poor, fair, rather wealthy and wealth) give the most priority to improvement/construction of sewerage system,

then building private latrines, and lastly installing water access to households (number 4 in row).

The consortium between information gathered from quantitative methods and qualitative methods shows high consent of the inhabitants when classifying priorities needed to be solved in the community.

Being aware of the sewerage system's importance in the neighbourhood as well as at home, in the last two years, a number of people have spent a large amount of money on reconstructing the existing sewerage system.

Among 84 households who paid for the sewerage system renovation of neighbourhoods and houses, the average amount of cost incurred by each household is 607,900VND, a rather large amount if compared to their income. 75 households of the 300 households interviewed replied that they did contribute to the regional sewerage system. As statistical data, their contribution amount is 46,400VND. During focus group discussions, some disclosed that they have unceasingly contributed not only money, but also labour in dredging mud and clearing off the sewerage system.

**"Dredging mud, digging rubbish and contributing money are regular".**

"The sewerage system is choked up yearly, even choked without rain, heavy rain makes the clogging worse. It is our mistake. I don't know how the sewerage system can cope with so much human and pig excrement and rubbish being discharged into it. Sometimes we advocate digging and dredging the sewerage system. Payment is made three or four times a year, at 10,000 or 15,000 VND for each installment. Those who have no money contribute their labour. My living quarter's sewerage system was constructed long ago and no reparation has been made. We wonder who is responsible for the sewerage system renovation. There is no use in complaining".

*(Focus group discussion in Trai Chuoi phuong)*

After renovating the sewerage system, constructing private latrines is also an essential demand of the households, especially where public latrines are common. Contamination and dirtiness of public latrines at some phuong hamlets make surrounding households impossible to stand; A woman who is a representative of Cat Bi Women's Union said in the focus group discussion:

**"A private latrine is necessary"**

We are living in a rubbish dump with our own excrement. Many households cannot stand public latrines because of their stinking and even more terrible the fact that dung overflows into the houses when it rains. But fixing it is impossible as no one has a private latrine. We are aware that most of our phuong are poor and wonder when we will have enough money to build a private one. We are longing for state support, if not investing absolutely, maybe a loan is possible for constructing septic-tanks and latrines. In my opinion, constructing a private latrine is very necessary for many households.

An inhabitant of phuong Tran Nguyen Han said :

"Flies, mosquitos, and contamination from the public latrines are killing us gradually. Standing for many years, we feel tired. We only wish to have a private latrine".

Another index reflects the demand of people for renovating/repairing/constructing sewerage systems and private latrines in households and assesses construction degrees. The table below shows the level of improvement/ construction demanded.

Kind of renovation and improvement	HH sewerage and sanitary system		Outside HH sewerage and sanitary system	
	HHs	%	HHs	%
1. Minor renovation	55	18.3	11	3.7
2. Major renovation and upgrading	105	35	76	25.3
3. New construction	99	33.0	189	63
4. No need to do anything	17	5.7	3	1
5.No need to do anything except management and maintenance	24	8	21	7
<b>Total</b>	<b>300</b>	<b>100</b>	<b>300</b>	<b>100</b>

From the above mentioned table, we can see that the demand for capital construction and improvement of HH's sewerage and sanitary systems has the highest proportion as indicated by 35% of households; the next highest demand is for new construction (33% of households).

A rather high percentage of respondents desired new construction funds for sewerage and sanitary systems outside the HH's. (189 households - 63%) The next highest request was for major renovation (76 households - 25.3%).

If taking into account the HH's sewerage and sanitary system, 68% of respondents are asking for capital renovation, improvement and new construction. For outside HH's sewerage and sanitary systems, 88.3% of interviewees said that some items need to be newly constructed and the existing system needs to be upgraded.

Although demand for improvement/construction of latrines exists, and the awareness of the bad effect of the surrounding environmental pollution on their family's health also exists, the households are not able to contribute more money to the sewerage system's renovation. A number of households have not been able to improve their contaminated latrine into septic-tank, semi-septic tank or newly constructed septic tank. They are looking forward to a credit fund to get enough money to invest in HH' sanitary facilities and neighbourhood facilities.

298 (99.3%) households said that this fund was very necessary to help households renovate their living environments. Only 2 households (0.7%) said that this fund was not necessary. It, therefore, can be affirmed that almost all people agree that a credit fund for sanitation is most important. It also meets the expectations of three wards.

In all focus group discussions, participants said that they are very excited that this fund may become available. One man at phuong Cat Bi said in the focus group discussion: *"Not only clothes and meals are arranged for us, but also latrines. We are so grateful and eagerly long for this fund to be available so that we can get a sanitary latrine and avoid the troubles of going to a neighbour's toilet or a public latrine "*

#### 6.4 Willingness and Ability to Repay

In replying to the question "If there is a fund for sanitation, are you willing to take loan?", 233 households (77.7%) wish to take loan; and only 67 households (23.3% )are not willing.

Analysing the reasons of these 67 households who do not want to borrow money, the survey team found that 60% of these households have got their own modern and sanitary latrine. 30% of the households are afraid of not being able to afford to repay the capital; 4% are living in temporary houses and do not have the willingness to invest in a latrine; and 6% of households can arrange sufficient money when improvement/construction is necessary.

200 of 233 households wishing to take loans have various kinds of private latrines, the rest of the 33 households do not. In an effort to make clear why the households having their own latrines are still willing to take a loan, we found in the focus group discussions that some have newly-constructed solid latrines so they do not wish to take a loan. The remaining are mostly old ones which were built up simultaneously with living quarters (1974-1976) and have not ever been repaired. Some have unsanitary latrines such as sulab latrine, or simple latrines so they also need to get a loan to build semi-septic tanks for better sanitation. According to the focus group discussions, many households are willing to take a loan for latrine construction or sewerage system renovation. Some would borrow over 2 million for investing in sewerage and sanitary systems both inside and outside HH's .

One male youth at Khu D2 phuong Cat Bi said :

"There is not any latrine or sewerage system in my house. To my anxiousness, I wonder how I could live in such a dirty environment. Having found out that a fund for sanitation is going to be available, I am so happy. I have the willingness to take a 3-4 million VND loan to construct a septic tank and an indoor and outdoor sewerage system. I intentionally save money by feeding pigs to repay the capital. If this fund is not available, we dare not have our own septic-tank and there will not be any sewerage system in our neighborhood".

- Focus group discussion -

Head of Khu C at phuong Trai Chuoi admitted: *"If a fund for sanitation is available and gives loans at low rates of interest, it is sure that 85 to 90% of households in my group are willing to take a loan. No one would refuse such a good opportunity after tolerating dirtiness and stinkiness caused by the choked-up sewerage system."*

In focus group discussions and in depth interviews of the poor, they all long for loans from a sanitation fund (if one exists). However, very poor households are afraid of not having enough money to repay the capital so they feel that not taking a loan is better.

**Fearing to borrow money to construct latrine.**

My family lives on my husband's income. He works hard in procuring old electric appliances to re-sell. If contriving, he can earn about five hundred thousand dong per month which is used to feed 5 people including one couple and three children. Being ill for years, I cannot earn much money. I am afraid that if I borrow money to construct a latrine, we might not be able to repay and then some one would come to confiscate my house; then where would we live?.

*- Indeep interview HHs in phuong Catbi -*

Very poor households (for instance, a mother and child living on a 180,000 dong pension in Trai Chuoi, etc.) wish to get financial assistance to build up sanitary facilities without repaying. We will return to this request in the recommendation part of this report.

In short, if not taking into account households who have solid latrines who can manage to borrow money to construct latrines, have no fixed shelter or are too poor, all the remaining households wish to take loans to improve or construct their latrines and sewerage system. A number of households have the willingness to get loans immediately to re-construct their sewerage system before this coming rainy season (of 1999).

**The fund for sanitation is available as soon as possible.**

"If this fund is available in 2000, it is not soon enough. I just want to take a loan right now (June 1999) to construct a sewerage system in time. If it comes later, we are sure to scoop water from our house as in the previous year. I hope this fund releases loans as soon as possible".

*-Medium group, Focus group discussion at phuong Tran Nguyen Han-*

**Loan size:**

Survey results of 300 households show that the average loan size the households wish to take for improvement/construction of latrine and sewerage system is 2,500,000 VND. However, there are different wishes expressed in focus group discussions. Men often ask for larger loan sizes, from 2 to 3 million VND. Women request 1.5 to 2 million VND. Proposals from women are lower than men's because women are familiar with daily living costs or many do not want to borrow a large amount and then struggle to the utmost to repay.

**Two million dongs are enough for me.**

"I don't want to repay 3-4 million of capital while I am now poor. If slinging and good at financial arrangement, I may spend 1.2 to 1.5 million dongs on constructing my septic-ank. The remaining amount may be enough for me to build a sewerage system. I think 2 million dongs are sufficient for us" - *Focus group discussion at phuong Tran Nguyen Han -*

After discussion and argument, finally a loan size of 2 million is acceptable to the majority of the households. However, as stated above some households still wish to get a larger amount (3 million dong). This seems reasonable to us.

**3 million dong is enough for us.**

"Cum D2 is inward, 200m away from the sewerage system of the city. If the State does not release a budget to construct an emerging sewerage system from our neighbourhood to the public system and we have to pay for it, 1 million dong is not enough. Constructing a septic tank and sewerage system from our house to the public sewerage system costs 2 million dong. We, therefore, need 3 million dong. We are not funded sufficiently; all construction is unfinished. A good latrine without a sewerage system is a waste".

*Focus medium group discussion D2 - Cat B1 -*

- Summarizing the results of qualitative and quantitative analysis, the conclusion can be made that the: loan size as expected by three phuongs is within 2 to 2.5 million dong. Households living in regions far from the main sewerage system of the city wish to take loan sizes of 3 million dong. Some wish to get 1.5 million dong, if insufficient, they then arrange more by themselves, but such an idea is rare at focus group discussions. Participants of focus group discussions, 7 /12 households interviewed in depth have the same opinion "if we receive a loan, we will repay".

**Expected rate of interest**

An issue often emphasized by the three phuongs is that the rate of interest must be reasonable or low. They can take the loan only if the rate of interest is reasonable.

According to quantitative results, monthly interest for the loan amount the households expect is 0.4%. If divided into each interest proportion, the survey team got results as shown below:

% of interest proportion	Household	%
0%	10	4.3
0.1-0.2%	11	4.7
0.3-0.5%	202	86.7
0.6-0.8%	9	3.9
1%	1	0.4
Total	233	100%

The above mentioned result shows that 10 households wish to take loans without interest. . Only one household offered the rate of 1%, the majority of 202 households (86.7%) prefers the rate fluctuation of 0.3 to 0.5%. The proposal of interest rates from 0.1 to 0.2% and 0.6 to 0,8% held up lower proportion.

Qualitative results of the information once again coincide with quantitative ones. Focus group discussions indicate that some households thought the loan size for sanitary facilities was a non-revolving fund from a foreign organisation so interest should not be imposed.



Interviewers explained that the fund for sanitation cannot loan money without charging interest but a high rate of interest is impossible as households cannot afford it. The survey aims to discover what rate the households can afford. There is not any remarkable difference on interest rates set forth in focus group discussions when the survey team worked with medium, better than medium, and poor households. The highest rate of interest is always compared to **preferential interest** (0.6%) which is given to very poor people and is issued by Bank for the Poor. Most of the households demanded that this rate should be lower than 0.6. The most reasonable fluctuation requested by households in group discussions is from 0.3 to 0.5%. In searching why the households demand to take loans at a rate lower than 0.6 (often from 0.3 to 0.5% per month), most interviewees said that investing into sanitary facilities was not a beneficial production.

**Investing into sanitary facilities is not as beneficial as production.**

"We presume that interest rate for this fund should not be as high as preferential ones for production issued by Bank for the Poor. As you know, investing into sanitary facilities and sewerage system is non-beneficial, i.e. we'll be burying money deep into the ground without any profit. So we wish the interest rate for this fund to be as low as possible. But too low of an interest rate cannot cover the costs of collectors and money managers. In my opinion, the interest rate of 0.3 to 0.5% is the most reasonable".

*- Focus group discussion at Tran Nguyen Han ward -*

Besides the above mentioned result of non-benefit investment into sanitary facilities, households of poor and very poor group discussions stated that most households did not have sufficient income, some were poor or too poor. So if the interest rate were too high, they would refuse such a loan.

**If interest rate is higher than 0.5, we are not able to take loan.**

"I even dare not take a loan for cloth and meals let alone for latrine or sewerage system. Without food we die but without private latrines, we cannot die. We just stand to discharge our excrement at a neighbour's or a public latrine. If the interest rate is more than 0.5%, we let it be"

*- Poor focus group discussion at Cat Bi -*

Especially some men in the group discussion, who could not afford the current rate of interest issued by credit bank or public organisation of phuongs, responded that "I think 1-2% rate of interest is acceptable." Their saying this did annoy participating women and these women often reacted negatively.

In short, the most preferential interest rate expected based on focus group discussion is from 0.3 - 0.5% per month. The proposals of interest rates among medium/better medium and poor households are not significantly different. However, for very poor households, some proposed an interest rate of 0.1-0.2%. The majority of such households have the need for a loan but dare not take one. They look forward to a State budget for sanitary facilities' improvement.

**Willingness to get aid**

"My husband felt ill continually and died two months ago. My money and property have gone to pay debts but I am now still in debt. My child and I are alone and live on 120,000 dongs/month which is my salary for babysitting. Food is expensive so how could I repay if taking a loan. I wish to get enough money to construct a septic-tank. I hope to receive support from the Government. I dare not take a loan."

*- Poor focus group discussion at Trai Chuoi-*

Some of the households interviewed in depth said that they also dare not take loans as their land for accommodation was about 8-10m<sup>2</sup>, or their land was illegally transgressed so they did not want to invest into sanitary facilities or indoor sewerage system.

**Loan cycle:** 02 year period is proposed as the most preferential and is supported by the women. Some men requested longer time (3-4 years) but many people did not approve of this.

**The poor do not want long-term loans, but the rich do.**

"I admit that the loan period should be subject to the statute of the savings fund for poor women at my phuong, a two-year loan period is possible. I am not well-off, a long-term loan can raise cumulative interest. A two-year term is enough to save money to repay. The poor should not take long-term loans, but the rich can accept this kind of loan for longer periods of time".

*- Women of poor focus group discussion at phuong Tran Nguyen Han -*

Some households who requested to take a loan for 3 million dongs will satisfy it within a 3 year period. In their opinion, repaying 3 million dongs within 2 years will cause them to have financial difficulties.

**Ability to repay:**

The living standard of the households is considered as an important indicator of ability to repay.

- According to assessment by surveyors, households who are living at an average standard hold up the highest proportion (46%). Following are the poor households (28.7%). Medium or better medium households (16.3%) take the third position. The rest include 2 very poor households (7%) and 6 well-off households (2.0%)
- Repaying 2 million or 2.5 million dongs (including interest) for those who are classified as medium, better than medium or well-off is not very difficult. Prime concern is given to those who live with a low standard of living (poor and very poor). Opinions on the ability to repay interest or capital were set forth in group discussions. Medium groups often raised very different methods for repaying interest and capital as compared to very poor groups because each method of repaying interest or capital is often affected by household economy.

### *Term of interest payment*

Poor people, especially poor women, can only repay interest and capital in monthly installments. Some women suggested that the collection of interest should be similar to the way of managing savings funds for poor women. They meant that they could accumulate 3,000 to 5,000 dongs a day. But some other opinions showed that such a method could make and give collectors trouble. Finally, monthly payment of interest was given the highest priority.

Medium or better than medium households wish to pay interest quarterly or every 6 months. In their opinion, this would be more convenient for both creditors and borrowers and would avoid micro-management of the loans

Discussion in key interview groups indicates that phuong Trai Chuoi and phuong Tran Nguyen Han's leaders presume that it is necessary to have a flexible collection method that would facilitate methods for either those who are not able to repay monthly or who wish to repay quarterly. At phuong Cat Bi, they prefer quarterly installment payments for the medium group as it is the best and least complicated method.

### *Repayment of capital*

In finding out what is the most reasonable method of repaying capital for the 300 households, the survey team makes these conclusions:

- 21.5% of households demand to repay monthly.
- 13.7% of households demand to repay capital quarterly.
- 20.2% of households demand to repay every 6 months
- 42.9% of households demand to repay monthly
- 1.7% of households demand to repay in some other way (free choice)

Thus 1/2 of households demand to repay capital annually. The households wishing to repay in such a method are twofold as compared to those who demand to repay by month.

Group discussions show that women often want to repay every 6 months while men want to repay after one or two years.

The abilities to repay differ from one income group to another. If the loan size is 2 million, loan cycle is 2 years, various income groups offer various options. One consists of poor households who demand to repay capital monthly within 2 years so as to repay 1 million a year (poor groups at Trai Chuoi and Tran Nguyen Han). Other options include paying every 6 months for poor households at Cat Bi, with each installment at 0.5 million dongs. This will allow them enough time to accumulate the money to repay.

**Repaying by money accumulation in monthly installment is the best.**

"We are poor households in Trai Chuoi phuong. In our opinion, it takes us two years to complete repayment of capital in monthly installments. One payment or repaying 1 million dongs after one year is out of our affordability".

*- Man's opinion - Poor focus group discussion at Trai Chuoi -*

While refunding 1 million dongs after one year is impossible for poor households, it is acceptable for medium/better than medium households. Another option for these households is that if they take a loan of 3 million dongs on a loan cycle of 3 years, the proposed refunding

method is : 0.5 million dong is paid back after the first year, 1 million dong will be paid back in the second year and 1.5 million dong will be repaid in the third year.

**If repaying 1 million dong a year, we can reserve money for other things.**

Monthly or quarterly installments trouble not only us but also collectors. We think capital should be repaid in 2 parts, 1 million for each payment is the best. How could we afford to do something if we have to repay the capital just after selling a pig, or lots of vegetables?

*Man in medium focus group discussion at Trai Chuoi*

We have our pension and we can accumulate to money to repay 1 million a year. This is the most convenient method.

*Medium and poor focus group discussion in Cat Bi-*

During group discussions, key interviews tended to agree on two ways of repaying because they think that "if we demand poor households to repay in the same way as well-off groups, they can not do it. However, if we request well-off groups to repay in the same way as poor groups, they will be troubled and feel uncomfortable. The best way is to offer two ways; one for those who can pay in two yearly installments, 1 million for each year; the other one for those who can afford to pay in monthly instalments".

In key interviews of Trai Chuoi, some set-forth opinions that the regulations for the capital repayment of SEARAC should be used as an example. This is under the management of Women's Union. They applied to the fund for sanitation, with a cycle of 2 years, the capital will be repaid from the 10<sup>th</sup> month on. The majority of the group discussion participants liked this method.

***Loan management :***

Both quantitative and qualitative analysis show that people usually expect public organisations such as Women's Union, veteran's associations, etc. to manage the revolving fund for sanitation so that they can take a loan from this credit fund.

96.5% of households have demanded to take loans through public organisations such as Women's Union. Only 1.7% of households demand to get loans directly from credit banks and 1.7% of households wish to borrow money from the water supply company.

However, as compared to veteran's associations, Women's Union has more prestige and trust from people in general.

**Women's Union is an organisation experienced in making loans and has the best access to us**

" Recently we have realised their practical activities in the community. Their credit loans are all successful and free from capital loss. In addition, they are close to us because women are all in the same family (smile). So I think it's better to let them manage this credit fund from which we can take loans. Taking the loan and repaying it are both convenient this way."

*- Majority of opinions in focus group discussion -*

In terms of loan management, Women's Union is the most appropriate choice and satisfies the expectations of the people. However, the outstanding issue in group discussions was that if a case of taking a loan but not repaying it occurs, does the Women's Union have jurisdictional status to pursue collection of the loan or not. The people, therefore, look forward to the combined assistance of People's Committees of phuong, head of cum, head of public group to ensure the good management of the credit loans.

People's Committee should be an important member

"I think it is impossible that the government does not involve itself in this credit fund. If coping with rough and absurd borrowers, could they (implicating Women's Union) apply fines such as coercion methods or not ? No, it is only phuong People's Committee who has the right to do so. We propose Women's Union to combine with phuong People's Committee, and heads of public teams to speed up and follow up on the taking of loans and borrowers repayment of them."

*- A man's opinion in medium focus group discussion at Tran Nguyen Han -*

According to the opinions of the people, if a fund for sanitation is available, Women's Union must discuss with People's Committee the statutes and objectives of the loan. The final expectation of the people is that this fund is available as soon as possible (replying to this question "What is your opinion on loaning and repaying capital for sanitary facilities"). Some persons affirmed: *"Although we are poor, we have no thought of taking a loan without repaying it. I believe that with the tradition of borrowers not remaining in debt from previous completed projects, our households will save money in any way possible to fully repay the capital and interest to the State".* - Head of B2, Cat Bi - Focus group discussion -

## **7 SUGGESTIONS TO ENCOURAGE LOW INCOME- HOUSEHOLDS TO IMPROVE SANITATION FACILITIES**

### **7.1 Suggestions for Borrowing and Repayment**

As mentioned previously, participants taking part in interviews, focus group discussions and in-depth household interviews gave suggestions on types of loans as follows (not in priority order):

- If the total loan for a household to upgrade/build a septic latrine is less than or equal to 2 million Vietnamese dong, the loan duration is two years with interest rates of between 0.3%-0.5%. Participants also stressed that they agreed to the rate of 0.5%. The interest will be paid quarterly. The capital recovery of 1 million Vietnamese dong will be implemented at the end of the first year and the rest of 1 million dong will be repaid at the end of the second year.
- If the total loan is 3 million Vietnamese dong, including 2 million dong for the construction of a septic latrine and 1 million dong for improvement of the sewerage system in house/residential areas, the loan duration will be three years. Principal recovery of 0.5 million, 1 million and 1.5 million dong will be implemented at the ends of the first year, second year and third year, respectively.
- It is necessary to work out measures to help poor households improve their sanitation facilities. These households, who do not dare borrow loans because of inability to repay, make up only 2.3 percent of surveyed households. Local communities (population groups or clusters) should choose such households and ask financial support and loan management organisations to help them with loan channels.
- Women's Union in phuong will be the representative organisation to receive loans. They will also manage and implement loan-borrowing activities. However, the People's Committee and mass organisations (such as the Veterans' Association) in a ward will play an important role in supporting the Women's Union to inspect the inhabitants' implementation. Heads of *to* and *cum* will help heads of Women's Union branches and women groups in these *to/cum* manage the use of loans with the aim of improving sanitation facilities.

### **7.2 Other Suggestions**

- A board in charge of inspecting loan activities to improve households' sanitation facilities and collecting the interest and principal of loans should be established. The board will be comprised of the Women's Union, the People's Committee, heads of *to* and other mass organisations (according to each locality's conditions).
- Saving and credit groups will be established at the lowest level in the Phuong. Their members will discuss loan regulations and make regulations for their own groups.

- In order to successfully implement loan activities for improving household's sanitation facilities, first and foremost ward authorities should choose households for piloting. Each cum should choose 15 households to grant loans to on a trial basis. These households will build septic latrines which will be patterns for local inhabitants to visit, study and learn from.
- To be granted loans with soft interest to improve sanitation facilities is the desire of almost all poor and medium households. The problem is that it is difficult to repay the loan's principal. Experiences show that in many localities poor people refuse to borrow money, even loans with low interest because of inability to repay. The integration of borrowing money for increasing income and for improving sanitation facilities should be implemented on a trial basis with poor households selected by the localities. This is the way to help poor households improve their sanitation facilities, pay the interest on the loans and repay the principal, thus contributing to the improvement of the environmental conditions in the population and the community.
- Apart from contributing money, localities mobilised inhabitants to take part in dredging sewers, making residential areas clean and creating jobs for the inhabitants, thus reducing money contributions for poor households.
- Local authorities should work out measures to solve illegal construction on sewer covers, thus partly improving neighbourhood's sewerage systems.

## **8 CONCLUSIONS AND RECOMMENDATIONS**

### **8.1 Conclusions**

Following are the conclusions resulting from the research:

- Almost all existing latrines are septic and semi-septic latrines. Few of them are modern ones with hygienic conditions. The remainder are seriously degraded because they were built 20 years ago and have not been repaired yet. Some households use low-quality latrines like sulab latrines or simple latrines which directly link with sewers.
- Public latrines still exist and most of them are bucket latrines. At present, these public latrines cause great pollution in residential areas. There are no organisations, agencies or individuals to repair or rebuild such public latrines.
- In many residential areas, degraded sewerage systems have not been repaired. Inhabitants' irresponsible attitudes toward environmental sanitation, e.g. pouring human and animal manure and rubbish into sewers, makes sewerage systems in many residential areas clogged and flooded. In some wards, there are no sewerage systems so that waste water runs freely or runs into ponds and lakes, making a bad impact on the people's lives. Almost all interviewees did not know which company is responsible for preserving, restoring and maintaining their regional and municipal sewerage systems.

- Progress has been seen in rubbish collection. However, co-ordination between URENCO and Urban Project Construction companies is not synchronous. So broken brick and rubbish are not collected after construction projects are completed.
- On desire and capability of repaying loans:
  - The majority of households held that it is necessary to establish a loan fund with a view to improving the environment for daily life.
  - Households having good septic latrines or being better-off families did not want to borrow loans. But they still support the establishment of this fund.
  - Households having or not having latrines want to borrow money from the above-said fund to build and rehabilitate latrines and sewers inside and outside the houses. Households who do not want to borrow loans make up a small percentage.
  - Most of households wanted to borrow 2 million Vietnamese dong. Some of them needed 3 million dong for building and renovating latrines and sewers. A few households wanted to borrow money without paying the interest while the majority of the households accepted interests rates of between 0.3-0.5% per month. Almost all people want to borrow money for two years. Some people who want to borrow much more money want to repay the loans over three years. Poor households who wish to borrow loans with an interest rate of 0.1-0.2%, can accept an interest rate of 0.5%.
  - There are different opinions on repaying interest and principal. Population groups who enjoy different living conditions and incomes - low or high, better-off or medium, rich or poor,- suggested different ways of payment
  - Many households agreed to pay interest quarterly. The poorest households can pay interest daily or monthly. Poor household groups want to repay principal monthly while medium households want to repay principal yearly (1 million Vietnamese dong per year). Households who borrow 3 million Vietnamese dong want to repay 500,000 dong at the end of the first year, 1 million dong at the end of the second year and 1.5 million dong at the end of the third year.
  - The poorest households wish for support from the community or the government to renovate and build sewerage systems and latrines at their houses.

## **8.2 Recommendations**

Following are recommendations by the research group based on the above-mentioned conclusions:

- It is necessary to launch information, education and communication activities to raise people's awareness of hygiene at home, residential areas and in the social environment in general. People should understand that environmental hygiene at home cannot be seen as being detached from the hygienic conditions of their residential area and society. Legal education for the people should be promoted because despite perceiving that what they were doing was a violation of the laws, many people kept on doing it. Besides there was



another group of people who did not know their action was illegal, therefore they did it. There should be an agency responsible for providing consultancy services on environmental hygiene to households and for helping them solve their problems.

- Discussions on loan provision regulations issued by lenders or group regulations among borrowers with the people should be held prior to the provision of the loans. Participation of the people in planning and implementation steps will be an insurance for proper loan granting and debt payment.
- A capital management and supervision Board with the participation of the Women's Union, the People's Committee and the head of the residential group as well as other mass organisations should be established. Members of the board are required to hold discussions to define each member's responsibility to ensure the successful implementation and provide assistance to each other when needed. Moreover, the people should know their obligations and the rights of each member of the board so they can come to the responsible person to ask for help if they have problems.
- It is necessary to mobilise the participation by the people and the local community in environmental protection activities as it helps reduce cash contribution by households.
- Assistance policies should be applied for extremely poor households. A number of households should be granted with a sum of capital and other sums should be non-interest loans which can be paid in several installments. Other households having greater difficulties should be granted with a whole sum for upgrading sanitary facilities at their houses. Selection of such households will be made by the community.
- There should be a further study to assist HH's in solving the problem of the inability to build private septic tanks due to the lack of living areas. This is one method that could be used to eliminate public latrines which cause difficulties in the protection of the environment within the community.

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Protecting and preserving a healthy habitat and environment is an urgent issue, not only for Hai Phong but also for other localities in Viet Nam. Giving financial assistance to low income and poor households to enable them to upgrade or build sanitary facilities at their houses is a correct policy and should be supported. The financial assistance provision will be made through a Fund which gives preferential loans. However, the assistance should be carried out on a pilot scheme in some localities in Hai Phong. Assessment and adjustment of financial assistance activities for upgrading and building sanitary facilities will be made before they are carried out in other localities in Viet Nam.

## 9. REFERENCES

1. Haiphong Women Union final report "final report: 5 years credit saving activities 1994-1998"
2. Phuong People Committee Annual report on "socio-economic situation in 1998 and orientation in 1999", Tran Nguyen Han, Trai Chuoi and Cat bi.
3. Du, Thai Thi Ngoc, "Credit and saving program for poor women", Ho Chi Minh city, 1998.
4. Bangladesh-Micro credit study: role of micro-credit for growth of Rural Water Supply and Sanitation supply chain in Bangladesh.
5. Hai Phong water supply and sanitation program: "The awareness and evaluation of customer and supplier on the present water supply service in Hai Phong city"
6. Hai Phong water supply and sanitation program: " Community participation and willingness to contribute for upgrading sewerage and sanitation system in Dong Quoc Binh, 1997, April.
7. Sanitation Promotion Kit: Financing for low-income households for sanitation facilities through households credit.

ANNEX 1

**Household questionnaire**

**DEMAND FOR LOANS FOR SANITATION**

**Ability and willingness to pay for improvement and construction of household sanitary facilities**

*Dear Mr / Mrs / Ms*

To protect the environment and improve sanitation, a revolving fund is proposed to be established to help families in Hai Phong that are not able use their own funds by themselves but have to borrow money to improve or construct their household sanitary facilities. The objective of our survey is to know the household demand to take such a loan and ability to repay.

Firstly, we kindly request you to answer the questions specified in this questionnaire. These questions relate to your household's living conditions, your opinions about the existing sanitation and sewerage system within your house and the surrounding area and especially the need to take a loan to improve or construct your household sanitary facilities.

Your answers will not be used for any other purposes except for a 300 sample study to support upgrading the sewerage and sanitation system of the city. Your cooperation will be highly appreciated.

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Date of interview: .../.../1999.

How long did the interview take? \_\_\_\_\_ minutes

*Interviewer*

*Signature*

*Supervisor*

*Signature*

## I. Household socio-demographic characteristic

1. Please let me know how many persons are living in your household ?
2. Please give us some brief information about the kind of persons living in your apartment / house

No	Members in relationship with the interviewee	Year of birth	Sex Male : 1 Female: 2	Education level	Occupation	Extra job
1						
2						
3						
4						
5						
6						
7						
8						

### Occupation

1. Government employee
2. Retired.
3. Military or police force
4. Trader, business(wo)man
5. Housework.
6. Baby, pupils
7. Invalid
8. Simple labor, artisan, like potter..
9. Other:.....

### Educational level

1. Illiterate
2. Write, reading
3. Grade: I
4. Grade · II
5. Grade : III
6. University / post graduate.

3. How many generations are living in the family?
  1. Nuclear family
  2. Extended family

## II. Housing condition and sanitary facilities.

1. Ownership of apartment / house
  1. The house is managed by the Land and Housing Dept. of Haiphong City.
  2. The house is managed by employed company / enterprise
  3. Private house
2. Does your household have a latrine or not ?
  1. Yes
  2. No
3. Which kind of the latrine does your family use?
  1. Septic latrine, semi-septic latrine.
  2. DVC
  3. Bucket latrine
  4. Sulabh latrine

5. Flush directly to sewerage, without septic tank
6. Other (specify).....

4. Where does your family use latrine, if there is no latrine in your house ?

1. Your company / enterprise
2. Living quarter.
3. Relative, friends
4. Neighbours.
5. Other (specify).....

5. Why does your house have no latrine ?

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6. What is the main water source that your household is using ?

1. Running water.
2. Well Water
3. Rain water
4. Pond

7. What about the status of the water supply to your household ?

1. Carry water from the public tank.
2. Pumping water from the public tank to your tank.
3. Piped house connection.
4. Other.....

8. The monthly water consumption .....m3

The average water cost per month .....VND

To be paid in accordance with:

1. The water meter
2. The flat rate given to each HH
3. The flat rate for HH group and divided (equally?) among HH's members

9. What is your opinion about existing status of sewerage in your house?

1. Good
2. Medium
3. Bad
4. Unacceptable

If "Bad" or "Unacceptable" please give reasons why?

.....

10. For last 2 years has the sewerage system in your house ever been repaired?

1. Yes
2. No

11. If yes, how much money did you have to pay ?

..... VND

12. Could you give your opinion about the existing sewerage conditions in your neighborhood?

- 1. Good
- 2. Medium
- 3. Bad
- 4. Unacceptable

If "Bad" or "Unacceptable" please give reasons why?

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13. For the last 2 years, has sewerage system in your neighbourhood ever been repaired ?

- 1. Yes
- 2. No

14. If yes, did your HH have to pay for it?

- 1. Yes
- 2. No

15. If yes, How much money did you have to pay? \_\_\_\_\_VND

**III. Sanitary Awareness**

1. What is your opinion about existing sanitation in your neighbourhood?

Status	Good	Medium	Bad
Sewerage	1	1	1
Latrine	2	2	2
SOLID Waste	3	3	3

2. In the cases where the sewerage system is choked-up, or there is an unsanitary latrine what will be the impact? Why is it choked up or what???

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3. In the area where your HH is living, do you (you or people in general??) realise the influence of the sanitary environment on the health of your HH members?

- 1. Yes
- 2. No

4. Do you know what organisations/companies have the responsibility for collecting SOLID waste / garbage in your neighbourhood?

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5. Do you know what organisation/company has the responsibility of sewerage and drainage systems, and sanitation of your city?

6. If the sewerage system of your house is choked-up, which organisations or services will you need in case you cannot solve this by yourselves?

-----  
-----  
If they know SADCO, please ask what they think about the service in septic collection / sewerage maintenance! Good, medium, poor

7. Please note down the urgency /priority order for the improvement/construction of the infrastructure system in your neighbourhood (list 3 most important things among the following things and mark them in accordance with their level of priorities from 1st to 3rd)

1. Road inside neighborhood \_\_\_\_\_
2. Sewerage system \_\_\_\_\_
3. Drainage system \_\_\_\_\_
4. Install the sewerage connection at home \_\_\_\_\_
5. HH sanitary facilities \_\_\_\_\_
6. Housing condition (UNSPECIFIC!!) \_\_\_\_\_
7. Waste and garbage collection and disposal \_\_\_\_\_
8. Development of parks and green areas \_\_\_\_\_

8. In your opinion, what should be done to improve the situation of the sewerage and sanitary systems in your house as well as in your area?

In your area may refer to immediate pipe connection outside or to other people in the area

Forms of repair /improvement	Sewerage and sanitation system in the house	Sewerage and sanitation system outside the house
1. Do simple repair	1	1
2. Do serious repair/upgrading	2	2
3. Construct new one	3	3
4. Do nothing, hire only people to empty whenever pipe is choked-	4	4
up	5	5
5. Do nothing except improving management and maintenance ?	6	6
6. Others (specify in details)		

IV. Household Income and Expenditure

1. Please tell us your HH monthly average expenditure ..... VND  
How much is your average expenditure for the following items per month:

- 1 Food ..... VND
- 2 Rent of house .....
- 3 Water fee .....
- 4 Electricity Fee .....
- 5 Sanitation fee .....
- 6 Social Security .....
- 7 .....
- Other (specify in details) .....

So the average expenditure per person is ..... VND/month (reconfirmed)

2. What is your HH total monthly average income?  
(Approximately) ..... VND

In which:

- 1. Salary (including pension) ..... VND
- 2. Small trading ..... VND
- 3. Husbandry ..... VND
- 4. Production activities /Business/service ..... VND
- 5. Saving ..... VND
- 6. Others (specify in details) ..... VND

3. Who makes the following expenditure items decisions in the HH?

Items	Husband	Wife	Couple
1. Food	1	1	1
2. Illness	2	2	2
3. Education	3	3	3
4. Buying expensive furniture (motorbike, television.....)	4	4	4
5. Funeral/wedding party/etc.	5	5	5



4. Among the following equipment, which items do you have?

- |                               |                     |
|-------------------------------|---------------------|
| 1. Car                        | 2. Motorbike        |
| 3. Television                 | 4. Refrigerator     |
| 5. Video                      | 6. Hi-fi stereo     |
| 7. Air-conditioner            | 8. Telephone        |
| 9. Washing machine            | 10. Gas cooker      |
| 11. Washing Water Heater tank | 12. Electric cooker |

5. In your opinion what is your family's living standards in comparison with the living standards of your neighbour?

Well-off	Better than medium	Medium	Poor	Very poor
1	2	3	4	5

6. Evaluation by the interviewer

Well-off	Better than medium	Medium	Poor	Very poor
1	2	3	4	5

## V. CREDIT LOAN

1. In the last two years, did the HH borrow MONEY from any \_\_ source?

1. Yes

2. No

2. If yes, what did you borrow for?

1. Paying debt
2. Serving the daily life
3. Producing, trading business
4. Solving urgencies in the daily life (unexpected income.....)
5. Other (specify in details) -----

3. FROM whom/which organisations did you borrow from? At which Interest rate PER MONTH?

Who/organisations	Amount	Interest rate
Credit Bank		
Social organisations		
Relative		
Others		

4. Who would decide to borrow money in your family?

1. Husband
2. Wife
3. Couple

**VI. Ability and willingness to take loan for improvement and Construction of household sanitation facilities**

Suppose that a special fund is established to lend money to households for them to upgrade sanitation facilities and sewerage system. The loan would be paid back in installments within 2 years.

1. Do you think the Fund is necessary for improvements at household sanitary facilities and sewerage systems?

1. Yes
2. No

2. If there is a Fund like this, would you borrow money to improve or construct the sanitation facilities and sewerage system of your house?

1. Yes
2. No

If no, please give reasons why? .....

If yes, please go to Q3

3. How much money do you intend to borrow ..... VND

4. What do you think is an appropriate interest rate? ..... % per month

5. What IS APPROPRIATE method for payment back among the following

1. Monthly
2. Quarterly
3. Every 6 months
4. Yearly
5. Others (specify in details) .....

6. Which way of borrow money is most appropriate with you?

1. Access the Bank directly
2. Through mass organisations (such as the Women's Union)
3. Other (please specify) \_\_\_\_\_

7. Please give your opinion about the proposed loan facility and about repayment for improvement and construction of the sanitation facilities and sewerage system in your house

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## ANNEX 2

# Checklist for household interviews and focus group discussions

**Flexibility:** *The following questionnaire is a guideline for in-depth interview and to focus the group discussion. However not every question will be relevant in all interviews.*

### I. Background information

- Living condition?
- Numbers of HH members (eating and living together)
- Age, marital status, number of children
- Education level, occupation/economic activities, income:
- People's definition of household classification (rich, medium and poor)
- Ownership of the house you are living in?

### II. Sanitary facilities

**Observation, mapping the house, place of sanitary facilities in the households.**

#### Latrine

- Type of latrine? Where is it? The latrine condition
- Investment in latrine
- When did you build latrine?
- Reasons to select the kind of latrine (relate with finance/land/...)
- Reasons why do not build latrine (relate with finance/land,...)
- Advantage and disadvantage of having no latrine

#### Water sources

- Short of domestic water sources (public stand point/house connection/...). How many households share the same water source,...
- The situation of water supply at present, enough or limitations; how to collect water? how to store water? The monthly water consumption per month (in cubic meters)? Do you have water meter?

#### SOLID Waste/ disposal

- Location and distance from house?
- Do you know organisations/persons to collect waste of your neighbourhood?

#### Sewerage of your house

- The current situation of sewerage (in a normal day; rain; flood,...)
- Did you repair sewerage (within 2 recent years)
- Amount of money used for the reparation (VND)

#### Sewerage system of your neighbourhood

- The current situation of the system in the 2 recent years?
- Did HH have to contribute to reparation of the system (by money/labour,...)

### III. Sanitary awareness

- Do you think sewerage system and latrines affect every day life of people (note: related diseases, disputes,...)
- How does *the current sewerage system and latrine in your house/neighbourhood* affect every day life of people? Should they be upgraded or repaired? Are you content with living conditions at your house at present?
- What are the urgencies/priorities for improvement of living conditions in your neighbourhood (road/sewerage/water supply/latrine/wastes and rubbish collection/green park,...)? Any suggestions for improvement and ranking? Why these suggestions?
- Can you contribute any amount for improvement of living conditions in your neighbourhood? Which methods for contribution (currency/labour)?

### IV. Income and Expenditure of the Household

#### Income

- Main income
- Total income per month
- Who has the highest income in your household? Who the money and manages the economy of the HH?

#### Expenditure

- How is the income of the HH (to meet the needs of HH or not?) If no, what does the HH have to do?
- Who are the persons making decisions for important expenditures in the HH?
- HH expenditures in a month (specific items)? Amount for sanitary fees (waste and rubbish collection, cleaning latrine,...)

Living standard of HH in comparison with the living standard of your neighbourhood (estimate by yourself; observe house, furniture, etc.)

Credit loan: In the last year did the HH take any loan? If yes, from where? What were the loans used for?

### V. Credit Loan for improvement, construction of sanitary facilities

**Expectations on a loan:** for improvement sanitary facilities, sewerage system, private latrine? What sort of latrine/sewerage system do you want to construct? Why do you select this solution? Finance by the HH for doing it (amount needed? Labour/materials etc.? You had this amount in the HH for doing it or you had to borrow it?)

#### Loan Fund

It is presumed that a Special Fund is established to lend money to HH's to enable them to upgrade sanitary facilities. Would you borrow from the Fund? Who'll make the decision to borrow? If HH does not borrow, reasons why? If husband or wife does not want to borrow for improvement of sanitary facilities, ,What are the ways to resolve?

- Amount : the amount of loan you want to borrow? What is an appropriate interest rate? Loan cycle/period? Term of interest? Payment back (monthly/quarterly/ 6 months/etc.)
- Management of loan fund: Who will manage the loan after borrowing? Who will take responsibility for constructing (employing construction workers, buying materials)? Who will take responsibility to pay back capital in the future; pay the interest expenses?
- Methods for lending: What are appropriate methods for lending? give reasons why? Which organisations could manage most appropriately a loan fund for improvement of sanitary facilities? Reason why?
- Do you know if your neighbourhood would like to borrow money for toilet improvement or for sanitary facilities?
- Do you have any opinion/suggestion for SADCO in Haiphong to improve their duties of urban environment management at present

**Annex 3: Proposed organisation chart for implementation of sanitation revolving sub-loan**

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